



**Energy Efficiency Plan:
Plan Year 1
(6/1/2011-5/31/2012)**

**Evaluation Report:
Peoples Gas and North Shore Gas
C&I Prescriptive Rebate Program
FINAL**

Presented to
Peoples Gas and North Shore Gas

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E. Executive Summary

E.1 Evaluation Objectives

The Commercial and Industrial (C&I) Prescriptive Rebate Program (Prescriptive Program) provides rebates to customers of up to 50% of the incremental cost to install, replace or retrofit qualifying equipment. While the actual list of equipment may vary over time, the program generally includes measures such as natural gas heating systems, control technologies, water heating equipment, and food service equipment. The Prescriptive Program is targeted to active customers of Peoples Gas or North Shore Gas (“the Companies”). Franklin Energy Services is the Prescriptive Program implementation contractor.

Impact and process assessments were undertaken by the evaluator. The primary objective of the impact evaluation is to estimate gross and net energy savings for Gas Program Year 1 (GPY1)¹ of the Prescriptive Program. These results will be used to validate program-claimed savings and to adjust estimates of savings to improve their accuracy. The primary objective of the process evaluation effort is to aid program designers and managers to structure their programs to achieve cost-effective savings while maintaining high levels of customer satisfaction.

E.2 Evaluation Methods

The key evaluation activities to assess gross and net impacts of the Prescriptive Program were:

- Verification of claimed savings
 - Engineering review of project-level tracking data and the algorithms used by the program to calculate energy savings for all measures and the assumptions that feed those algorithms
- In-depth interviews
 - Program implementation contractor
 - Program trade allies/program stakeholders (e.g. wholesale equipment distributors)
- Program materials review
- Participant telephone interviews via Computer Assisted Telephone Interviews (CATI)

¹ Gas Program Year 1 was June 1, 2011 through May 31, 2012.

This program has not been evaluated before and so according to the NTG Framework,² the NTG ratio determined from GPY1 evaluation research is to be applied retroactively. The program falls under the following condition from the NTG Framework: *“For existing and new programs not yet evaluated, and previously evaluated programs undergoing significant changes — either in the program design or delivery, or changes in the market itself — NTG ratios established through evaluations would be used retroactively, but could also then be used prospectively if the program does not undergo continued significant changes.”*

E.3 Key Impact Findings and Recommendations

As shown in Table E-1, savings verification of the GPY1 Prescriptive Program found that verified gross energy savings were approximately 0.2% lower than ex-ante gross savings reported in the implementation contractor’s (IC’s) tracking system, resulting in a realization rate of 1.00³ (realization rate = evaluation verified gross / ex-ante gross from the tracking system). Table E-1 provides the evaluation research findings net energy savings based on a NTG ratio of 0.43 calculated from GPY1 evaluation research.

Table E-1. GPY1 Natural Gas Savings Estimates

Category	Peoples Gas Energy Savings (Therms)	North Shore Gas Energy Savings (Therms)
Ex Ante Gross Savings	529,545	99,134
Ex Ante Net Savings	251,840	49,965
Verified Gross Savings ⁴	528,485	98,936
Research Findings Net Savings	227,249	42,542
Verified Net-to-Gross Ratio	0.43	

Navigant Analysis of Franklin Energy tracking database (8/27/2012 database)

² “Proposed Framework for Counting Net Savings in Illinois.” Memorandum March 12, 2010 from Philip Mosenthal, OEI, and Susan Hedman, OAG.

³ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

⁴ The September 14, 2012 final version of the first State of Illinois Energy Efficiency Technical Reference Manual (TRM) (effective as of June 1, 2012) has been agreed to by Illinois Stakeholder Advisory Group (SAG) participants and has been approved by the Illinois Commerce Commission in Docket No. 12-0528 as of the date of this report. The verified gross savings shown in Table E-1 assumes that gas measures covered by the TRM are deemed for implementation and evaluation purposes in GPY1, after the ICC approval of the TRM and TRM Policy Document for use in GPY1. For the Prescriptive Program, evaluation research findings for gross savings that do not assume deemed status of TRM measures in GPY1 were identical to verified gross savings with deeming.

The mean verified gross realization rate for the Prescriptive Program was 1.00⁵ at ±0.09% relative precision at a 90% confidence level. A net-to-gross ratio of 0.43 was estimated for the Prescriptive Program at a relative precision of ±9 % at a 90% confidence level.

The variation in the project level realization rates is minimal, resulting in the verified gross savings realization rate of 1.00⁶ at the program level. This minimal variation also resulted in very good precision estimate of 0.09%.

The primary impact findings and recommendations are as follows:

Finding: The evaluation team performed an independent verification of the program tracking database to determine whether the database included an appropriate level of input, outliers, and potentially missing variables. The IC provided unit measure savings estimates for program qualifying measures. Navigant performed a review and verification of the algorithms and assumptions. Our estimates based on the Illinois Technical Reference Manual (TRM)⁷ were approximately the same as those provided in the IC document, although for some measures per unit values did not match exactly, this is possibly due to rounding differences. While

Recommendations:

- While, the tracking system is updated to match the measure-level deemed savings estimates found in the IC's *Master Measure Document*⁸, the evaluation team recommends minimization of rounding errors when applying the estimated measure deemed savings to calculate project savings in the tracking system.
- The tracking system should have fields that indicate the measure unit savings, as well as the unit of measurement. The tracking system should document rebate quantity (physical measure count) and also savings quantity (which for boiler measures could be recorded in MBH).
- The tracking system should include input capacity and efficiencies for new and old/removed boilers and furnaces. At a minimum, the tracking system should provide input capacities for the new equipment.

⁵ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

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⁷ Illinois_Statewide_TRM_Effective_060112_Final_091412_Clean.docx

⁸ The Master Measure Document is Franklin Energy's document that defines GPY1 "deemed" measure savings using the assumptions and algorithms from the 2012 final version of the (TRM) where it applies, and "non-deemed" savings for measures not covered by the TRM.

- The tracking system should track measure cost information such as equipment cost, installation, and the measure useful life or age of existing equipment. This information is useful for evaluating measure and program cost effectiveness.

Finding: Fifteen out of thirty-seven (41%) respondents to the GPY1 CATI survey implemented boiler tune-ups, and 10 out of 15 indicated they had a previous tune-up within the last three years. Many of these (7/15 or 47%) indicated they had a maintenance contract for the heating system equipment.

Recommendation:

- In GPY2, the Prescriptive Program will need to screen applicants so that only those who had not implemented boiler tune-ups nor had maintenance contracts within the last three years qualify to receive incentives, as required in the Illinois TRM for realizing savings from boiler tune-up applications.

Finding: Several participants demonstrated high free-ridership, contributing to the low overall NTG ratio, although sample sizes for any segment except the combined PG and NSG population were too small to draw any statistically significant conclusions about more specific results. Participants or projects with low NTG ratios included those who installed boilers greater than 90% thermal efficiency. These projects had an average NTGR of 0.38 (from 6 out of 13 projects). Projects with boiler tune-ups had an average NTGR of 0.47 (from 14 out of 57 projects). Projects with steam trap repair/replacement measures had an average NTGR of 0.50, based on a sample size of 4 out of 14 projects.

The majority of participants who installed steam trap measures, boilers or performed boiler tune-ups indicated strong likelihood that they would have installed the same equipment without the program. Overall, 51% of the 37 respondents indicated extreme likelihood of installing the same equipment without the program, mostly citing equipment age and maintenance issues as strong basis for implementing measures, with moderate indication of program influence. One participant said “the incentive is important, but the maintenance and upkeep of the equipment is important as well, and that we would have done the same thing without the incentive.” Another participant said “I would have done this project anyway because I am aware of the need for energy efficiency systems.”

Recommendation:

- If the findings in the above trends persist through GPY3 and a larger sample is obtained through the Participant Survey, , the Prescriptive Program should consider expanding marketing and outreach and consider strategies to encourage broader participation by C&I customers in equipment measures, while screening boiler tune-up measures as indicated above.

Evaluation recommendations for the TRM are summarized in Appendix 5.3.

E.4 Key Process Findings and Recommendations

The primary process findings and recommendations are as follows:

Finding: The majority of survey respondents (59%) reported that they were first made aware of the program by their contractor or by a trade ally. An additional 19% reported that they learned of the program through a utility account manager or representative. Only 4% of respondents reported that they were first made aware of the program through their exposure to the utility program website. When asked what is the best way of reaching potential program participants with information about energy efficiency opportunities like the Prescriptive Program, the most cited method was e-mail, with 44% of respondents suggesting e-mails as a method, followed by bill inserts, which were mentioned by 30% of respondents.

Recommendation:

- Navigant suggests increasing distribution of program information via e-mail and bill inserts to customers.

Finding: While nearly all the survey respondents used a contractor for their program project, 58% reported that they did not know if their contractor was a program-qualified trade ally or not. Only 32% of the survey respondents reported that they did use a program qualified trade ally. This suggests that the trade allies may not be promoting their involvement with the program to the fullest extent possible. When asked to rate how important it is that their contractor is a program trade ally, on a scale from zero to ten, where zero is “not at all important” and ten is “very important”, the average rating was 5.6. However, one-third of the respondents reported a rating of greater than seven.

Recommendation:

- Encourage trade allies to promote their status to participating and potential customers.

Finding: When asked about the drawbacks to participating in the program, 11% of participants reported that the program paperwork was too burdensome, and a few respondents cited the uncertainty of receiving a rebate as an issue. Since the program requires that the measures be installed before a rebate is issued, the perceived uncertainty of whether or not the participant will actually receive the rebate is a potential barrier to increased participation.

Recommendation:

- The IC should investigate options for simplifying the required paperwork. For instance, if certain fields can be automatically populated with customer information for pre-approval applications, this may alleviate the perception that the paperwork is burdensome.

- An additional recommendation would be to create an optional pre-approval process or a less formal pre-installation review process that would allow for a review of measure eligibility and the required documentation and paperwork.

Finding: Contractors were satisfied with the program and its role in their businesses. Some contractors indicated that although they found it initially confusing, the program has become an asset and has, in some instances, boosted their sales. Contractors also unanimously agreed that the program has given them an increased level of customer service to offer their customers without compromising services in other areas of their business. Again, contractors were unanimous in their positive reflections of the IC's post-inspections of the installations. Four of the nine contractors interviewed considered that the marketing material could be more strategically targeted.

Recommendation:

- The program may benefit from including contractors' input in outreach material development. The basis of this is that their unique experience in addressing misunderstandings and questions of customers directly will assist in a comprehensive program and its development.

1. Introduction to the Program

1.1 Program Description

The Prescriptive Program is targeted to all C&I customers within Peoples Gas and North Shore Gas service territory. The Prescriptive Program provides rebates to customers of up to 50% of the incremental cost to install, replace or retrofit qualifying equipment. While the actual list of program-incentivized equipment varies over time, the program generally includes measures such as natural gas heating systems, control technologies, water heating equipment, and food service equipment. The Prescriptive Program is targeted to active customers of North Shore Gas or Peoples Gas (“the Companies”). In general these customers are served under rates S.C. No. 2 and S.C. No. 3 (North Shore Gas) and S.C. No. 4 (Peoples Gas).

Customer rebates are based on a portion of the incremental cost difference between standard or minimum-code efficiency and high-efficiency equipment that varies by measure. If the common industry practice is to replace equipment with higher efficiency as compared to the standard- or minimum code-required efficiency, the higher efficiency number is used as a baseline from which to calculate the rebate and energy savings. Customers may also receive a rebate without pre-approval for participation.

The Prescriptive Program collaborates closely with the C&I Custom Program and the Small Business Energy Savings (SBES) Program to target both end-use customers and trade allies. The Prescriptive Program relies on wholesale and retail trade allies to assist in the marketing of this program. Trade ally support and engagement is considered to be a key element to the success of this program. The Prescriptive Program may provide incentives to trade allies for specific, limited-time promotions.

It is the intent of Peoples Gas and North Shore Gas and ComEd to cooperate in offering this program to promote measures that save both gas and electricity, where appropriate. In addition, the utilities collaborate to provide education and outreach to customers about the benefits of energy efficiency.

The initial program implementation period is three years which commences with the GPY1 evaluation year.⁹ Key metrics for this program include energy savings, overall cost per therm saved, participation rates, number of incomplete/flawed applications, and responses to customer satisfaction surveys. The initial planned net therms savings goals and budgets for the GPY1 C&I Prescriptive Program are presented in Table 1-1.

⁹ Program year designations are as follows: GPY1 begins June 1, 2011 and ends May 31, 2012; GPY2 begins June 1, 2012 and ends May 31, 2013; GPY3 begins June 1, 2013 and ends May 31, 2014.

Table 1-1. C&I Prescriptive Program Savings Goals and Budgets

Program	Incentives Budget	GPY1 Participation Goal (Measures)	Target Gross Energy Savings (Therms)	Target Net Energy Savings (Therms)
Peoples Gas	\$721,190	3,530	1,019,774	548,518
North Shore Gas	\$146,400	710	208,406	113,396
Total	\$867,590	4,240	1,228,180	661,914

Source: Integrys EE Plan Compliance Filing (June 2011)

1.2 Evaluation Questions

The evaluation sought to answer the following key researchable questions.

1.2.1 Impact Questions

1. What are the gross impacts from this program?
2. What are the net impacts from this program?
3. Did the program meet its energy saving goals? Why or why not?
4. Are the deemed savings values reasonable?

1.2.2 Process Questions

Marketing and Participation

1. Are the program marketing plan and program promotional materials aligned with program benefits? Do they clearly communicate program benefits?
2. How did customers become aware of the program? What are key barriers to participation for eligible customers? What marketing strategies could be implemented to address these barriers?
3. Has the program effectively recruited trade ally partners to promote the program to customers? Is the program effectively leveraging its trade ally network and/or other industry associations to promote the program to customers?

Program Characteristics and Barriers

1. What areas could the program improve to create a more effective program for customers and program partners (for example, upstream incentives) and help increase the energy impacts?

2. Does the application/enrollment process present any barriers to program participation?
3. Are customers, trade allies and program partners satisfied with the aspects of program implementation in which they have been involved?
4. Is the program effectively collaborating with ComEd and other programs, such as the Peoples Gas and North Shore Gas C&I Custom and Small Business Energy Savings programs?

Administration and Delivery

1. What challenges occurred in initial program implementation and how were they handled?
2. Has the program IC's field delivery been consistent with program design?
3. Are the program administrative and delivery processes effective for smoothly providing incentives to customers?
 - a. Program tracking and information management systems
 - b. Internal and external program communications
 - c. Program delivery organization and staffing, and
 - d. Skill levels needed to implement the program
4. What are the verification procedures for the program? Have they been implemented in a manner consistent with design? Do they present a barrier to participation or perceived undue burden on customers?

2. Evaluation Methods

This section describes the analytic methods and data collection activities implemented as part of the GPY1 impact and process evaluation of the Prescriptive Program, including the data sources and sample designs used as a base for the data collection activities.

2.1 *Primary Data Collection*

The key evaluation activities to estimate the evaluation verified gross energy savings of the Prescriptive Program were:

- Reviewed tracking data and deemed savings assumptions used by the program to assess correct implementation of deemed values in the ex-ante gross savings estimates;
- Implemented a stratified random sampling design to select 70 projects from the population of Prescriptive project applications for the participant telephone survey, completing 37 interviews after attempting contact with the entire population of GPY1 participants; and
- Conducted an engineering review of the tracking database entries and telephone responses for CATI respondents.

The process analysis was conducted following completion of the telephone survey of program participants. Free-ridership was calculated using an algorithm approach based on survey self-report data. The NTGR was calculated for GPY1. Navigant completed telephone interviews with 37 Prescriptive project contacts from GPY1 to support net impact research.

These activities are summarized in the Table 2-1 below.

Table 2-1. C&I Prescriptive Rebate Program Evaluation Data Collection Research Methodologies

Collection Method	Subject Data	Quantity	Gross Impact	Net Impact	Process
In-depth Interview	Implementation Contractor	1			X
In-depth Interview	Participating Trade Allies	9			X
Engineering Review	Program tracking database	37	X		X
Telephone Survey	Participating Customers	37	X	X	X

2.2 Additional Research

To support the impact and process evaluation efforts, the evaluation team conducted a verification and due diligence review of the Prescriptive Program and tracking system. Detailed findings and recommendations to improve the program operations and tracking database are documented in Section 3. The full due diligence memo can be found in the Appendix 5.5.

Under this task, the Navigant team reviewed quality assurance/quality control (QA/QC) activities already in place to determine:

- Whether appropriate eligibility criteria were properly adhered to and applications were backed with supporting documentation;
- Whether savings were calculated correctly and project information entered in an accurate and timely manner in the program tracking system;
- If any QA/QC activities are biased (i.e., incorrect sampling that may inadvertently skew results, purposeful sampling that is not defensible.); and
- Whether the data needed for program evaluation were being thoroughly captured by the program tracking system.

Additional research efforts included a review of the Prescriptive Program deemed savings estimates for GPY1, using the Illinois TRM. Peoples Gas and North Shore Gas adopted the directives from the Illinois Commerce Commission (ICC) to apply the algorithms and assumptions from the TRM to estimate ex-ante gross measure savings in GPY1. Our review efforts were to identify whether the algorithms and assumptions were adequately applied or if there were discrepancies that needed correction. Where the evaluation team found a discrepancy or if an incorrect per unit savings value was applied, we highlighted it for further

consideration by the IC. The evaluation team provides recommendations for adjustments to be applied to deemed savings in Appendix 5.3.

2.3 *Impact Evaluation Methods*

This section describes the analytic methods implemented as part of the GPY1 impact evaluation of the Prescriptive Program. The key evaluation activities to assess gross and net impacts of the Prescriptive Program were:

- Engineering review of the program tracking data and the program calculated unit measure savings, using the Illinois TRM assumptions and algorithms for deemed measures, and IC savings estimates for measures not deemed in the TRM;
- Completed computer assisted telephone interviews (CATI) with 37 Prescriptive project contacts to support the gross and net impact analysis approach¹⁰; and
- Analyzed responses from the sample of 37 Prescriptive projects from the participant telephone survey to establish if the reported measure types or specifications were confirmed by the customers, and that installed measures were operational and producing savings. The evaluation team considered measure-level gross impact adjustments and applied any changes to the individual projects.

2.3.1 **Gross Program Savings**

To best estimate the verified gross savings and gross realization rates from the relatively small combined population of GPY1 Peoples Gas and North Shore Gas projects, we attempted to contact all GPY1 participants. Interviews were completed with a sample of 37 participants. Table 2-2 provides a summary of the ex-ante gross impact of the sample for the Prescriptive Program in comparison with the program populations for Peoples Gas and North Shore Gas. A sample of 37 participants were surveyed which represented 27% of the population and approximately 29% (or 184,933 therms) of the combined ex-ante gross savings claimed.

Table 2-2. Profile of GPY1 Gross Impact Sample

Population Summary			Sample			
Utility	Number of Projects (N)	Ex-ante Gross Therms	n	Ex-ante Therms	Sampled Project % of Population	Sampled Therms % of Population
Peoples Gas	106	529,545	29	172,610	27%	33%
North Shore Gas	31	99,134	8	12,324	26%	12%
Combined	137	628,679	37	184,933	27%	29%

¹⁰ We targeted a 90/10 level of confidence and relative precision for the combined population of Peoples Gas and North Shore Gas participants.

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking system 8-27-2012 extract; analysis of CATI respondents

The key evaluation activities to estimate the verified gross energy savings of the Prescriptive Program considered two types of adjustments to ex-ante gross savings:

- ***Adjustment to Measure Gross Unit Savings.*** Navigant reviewed the tracking data and assumptions for TRM deemed and non-deemed per unit measure gross savings values used by the program, to assess correct implementation of the values in the ex-ante gross savings estimates and where necessary make measure-level adjustments; and
- ***Adjustment to Measure Count/Type from CATI Responses.*** Navigant conducted a review of the energy savings estimates of 37 sampled participant telephone survey respondents, to assess the possibility of measure or savings adjustment based on participant responses to questions on measure eligibility, quantity, and conditions of operation.

The method used to calculate the sample verified gross savings is presented below. Navigant multiplied the reported ex-ante gross savings from each measure within the sample of 37 projects by the adjusted measure gross unit savings realization rate and the adjusted measure count/type realization rate. The result is the verified gross savings for the measure, which we then summed to the project level to get the verified gross savings estimation for respective projects in the sample. The calculation is as follows¹¹:

$$\text{Verified Gross Savings} = (\text{Ex-ante Gross Savings}) * (\text{Measure Unit Savings RR}) * (\text{Measure Count \& Type RR})$$

Navigant estimated the verified gross realization rate for the sample (which is the ratio of the verified gross savings to the reported ex-ante gross savings) and applied the verified sample gross realization rate to the population to estimate the program level verified gross energy savings.

A simple ratio estimation technique was used to analyze the sampled ex-ante and the verified gross savings to estimate the achieved relative precision at a 90% level of confidence for the combined sample of Peoples Gas and North Shore Gas projects. Detail on the ratio estimation technique is provided in the Appendix 5.4.

2.3.2 Net Program Savings

The net-to-gross analysis was conducted following completion of the telephone survey of program participants and trade allies. Free-ridership was calculated using an algorithm

¹¹ This formula estimates savings by taking ex-ante values from the tracking database for sample measures and using adjustment values from Table 3-3 and Table 3-5.

approach based on survey self-report data. The existence of participant spillover was examined using survey self-report data. The detailed methodology is provided in Appendix 5.2.

This program has not been evaluated before and so according to the NTG Framework,¹² the NTG ratio is to be applied retroactively. The program falls under the following condition from the NTG Framework: *“For existing and new programs not yet evaluated, and previously evaluated programs undergoing significant changes — either in the program design or delivery, or changes in the market itself — NTG ratios established through evaluations would be used retroactively, but could also then be used prospectively if the program does not undergo continued significant changes.”*

¹² “Proposed Framework for Counting Net Savings in Illinois.” Memorandum March 12, 2010 from Philip Mosenthal, OEI, and Susan Hedman, OAG.

3. Evaluation Results

3.1 Impact Evaluation Results

This section presents the Prescriptive Program impact evaluation results. Included in the impact evaluation results are a verification and due diligence procedure review and tracking system review. A gross impact parameter estimate and gross and net impact results are also set forth below.

3.1.1 Verification and Due Diligence Procedure Review

On May 24, 2012, Navigant presented to Peoples Gas and North Shore Gas and the IC, the key findings and recommendations from the due diligence and verification task. Below is the response from the IC in a memo sent to Navigant on July 18, 2012, that describes what recommendations have been addressed or are receiving attention¹³. Additional comments or suggestions are provided by the evaluation team, where we found issues that may need additional attention. The full due diligence and verification memo is shown in Appendix 5.5.

Overall, the evaluation team found that program quality assurance and verification procedures met with national best practices and met or exceeded the expectations of the evaluation team. Key recommendations were:

- **Recommendation:** Adding a physical unit count quantity field in the tracking system for measures with quantities scaled in MBTU.
IC Response: All measures that are incented by MBTU input are separately entered into the system as individual retrofits. If one customer submits an application for three boiler tune-ups, three separate retrofits are entered. Therefore, program management staff knows that each of the boiler tune-up measures represents one boiler that was serviced through the program.
- **Additional Evaluator Comments:** Adding a field in the tracking system with the unit of measurement or quantity will be useful for evaluation data handling routines to distinguish quantities of measures incented in MBTU.
- **Recommendation:** Tracking net and gross savings in addition to the NTG ratio for each measure.

¹³ C&I Process Evaluation Responses - PY1.docx (response memo was received from Franklin Energy on July 18, 2012)

IC Response: In the Prescriptive Program, all savings recorded (and submitted in the filing) are net. Program management will explore adding a field for gross savings and identifying in the program metrics the NTGR.

- **Recommendation:** Improved Trade Ally oversight.

IC Response: This recommendation has three parts: 1) post-inspection of the first project submitted by a TA; 2) monitoring TA performance; and 3) developing a complaint resolution process. These are all wise recommendations and program management will develop three separate processes to address each of these by September 2012.

- **Recommendation:** Inspect the first few installations of any given measure and those that have a small rebate but high program-level impact because of large rebated quantities.

IC Response: This is a sound recommendation and a process will be developed to address this.

- **Recommendation:** Develop internal guidelines for handling exceptions to published program rules and document those decisions.

IC Response: This process already exists and is in place. See, for example, Project 27480. Granting exceptions is at the discretion of program management per operations manual.

- **Recommendation:** Valuable post-inspection data is not captured in the program tracking system.

IC Response: Program management will work with the IM team to identify additional fields not already in the system (as suggested by Navigant) that could be added to the system for tracking post-inspection findings, such as pass/fail status. Franklin Energy has subcontracted Post-Inspections for the Prescriptive Program to DNV KEMA. This relationship began in October 2011 and will continue through the duration of the program. All C&I Prescriptive post-inspections are completed by this third-party vendor.

- **Recommendation:** Track data required by the adoption of the TRM.

IC Response: Program engineers will review the TRM for key parameters required by the TRM and will work with the IM team to determine the best way to track them within the system.

Additional Evaluator Comments: Franklin Energy provided to Navigant the master list of default measure per unit savings¹⁴ estimated from the TRM for use in GPY1 and GPY2. Most of these estimates are already incorporated in the tracking system, as we found in the 8/27/2012 tracking database sent to the evaluation team.

- **Recommendation:** Highlight the requirement that customers comply with the Terms and Conditions of the program (post-inspection, evaluation surveys, verification, etc.).

IC Response: This is contained within the application's terms and conditions numbers 8, 10 and 15.

¹⁴ Copy of Integrys_Master_Measure_Document 091012.xlsx

Additional Evaluator Comments: The evaluation team experienced enormous challenges from customers to comply with this terms and conditions to complete the evaluation telephone surveys. The program should increase awareness among customers regarding the importance of complying with this condition.

- **Recommendation:** Review projects for data entry errors in the tracking system column field name “Project Type.”

IC Response: The project type field is a new field in Bensight. Process documents will be updated to ensure that these fields are all populated correctly. The six projects identified in the memo (37001, 44502, 24721, 24586, 24596, and 27742) have been reviewed and corrections were made where necessary.

3.1.2 Tracking System Review

The evaluation team performed an independent verification of the program tracking database to determine whether the database included an appropriate level of input, outliers, and potentially missing variables. The gross impact evaluation efforts were based on reviewing the tracking database extract delivered by the IC to the evaluation team on 8/27/2012. This dataset included ex-ante net therms savings estimated from the Illinois TRM gross savings assumptions and algorithms, and measure-level NTGRs from planning assumptions made by the IC for GPY1. On a separate spreadsheet, the IC provided unit measure savings estimates for program qualifying measures (*Integritys Master Measure Document 091012.xlsx*)¹⁵. Navigant performed a review and verification of the algorithms and assumptions. Our estimates from the TRM were almost the same as those provided in the IC document, but as we have shown in Table 3-1, some measures had per unit values that did not match exactly; this is possibly due to rounding differences.

Recommendations:

- The IC should minimize rounding errors when applying the deemed savings estimates found in the *Master Measure Document* to calculate project savings in the tracking system;
- The tracking system should have a field that indicates the measure unit savings, as well as the unit of measurement. The tracking data can have rebate quantity (physical measure count) and also savings quantity (which for boiler measures could be recorded in MBH);
- The IC should ensure updates of the tracking system for GPY2 evaluation includes measure end-use and participant business type;

¹⁵ The Master Measure Document is Franklin Energy’s document that incorporates savings using the assumptions and algorithms from the 2012 final version of the Illinois Technical Reference Manual (TRM) for deemed measures, and IC calculations for non-deemed measures not covered in the TRM.

- The IC should include in the tracking system the zip code or county lookup information for weather dependent program measures; and
- The tracking system should include project/measure specific information for boilers and furnaces, such as input capacity and efficiencies.

Table 3-1. GPY1 C&I Prescriptive Participating Measures - Verified Per Unit Savings

Measure	Unit	Ex-ante Gross Therms/Unit	Verified Gross Therms/Unit	Verified Gross Realization Rate
Boiler Cutout/Reset Controls	MBH	1.170	1.163	0.994
Boiler tune-up	MBH	0.234	0.233	0.996
Boilers < 300 MBtu > 90% AFUE	MBH	1.957	1.965	1.004
Boilers > 300 MBtu > 90% TE	MBH	1.617	1.615	0.999
Boilers > 300 MBtu > 85% TE	MBH	0.851	0.855	1.005
Condensing Unit Heater	MBH	2.255	2.260	1.002
Energy Star Convection Oven	Oven	306.0	306.0	1.000
Energy Star Fryer	Fryer	508.0	508.0	1.000
Energy Star Steamer	Steamer	1,683.0	1,683.0	1.000
Furnace ≤225 MBH ≥92% AFUE	Furnace	189.6	189.6	1.000
Furnace ≤225 MBH ≥95% AFUE	Furnace	229.5	229.5	1.000
Infrared Charbroiler	Broiler	661.0	661.0	1.000
Infrared Salamander Broiler	Broiler	239.0	239.0	1.000
Infrared Upright Broiler	Broiler	1,089.0	1,089.0	1.000
Pasta Cooker	Cooker	1,380.0	1,380.0	1.000
Pre Rinse Sprayers	Sprayer	117.9	117.9	1.000
Programmable Thermostat	Thermostat	178.0	178.0	1.000
Steam Trap Repair/Replacement	Steam Trap	330.5	330.5	1.000
Water Heater .67 EF	Water Heater	148.0	148.0	1.000

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)
Integritys Master Measure Document 091012.xlsx

3.1.3 Gross Program Impact Parameter Estimates

The program parameters used for evaluating the program are summarized in Table 3-2.

Table 3-2. GPY1 Gross Program Impact Parameter Estimates

Parameter	Value	Deemed or Evaluated?	Source Notes
		Verification Report	Verification Report
Verified Realization Rate on Ex-Ante Gross Savings	1.00 ¹⁶	Evaluated	GPY1 EM&V analysis based on program tracking data and participant CATI responses
Measure Type and Eligibility	Varies	Evaluated	GPY1 EM&V analysis based on program tracking data and participant CATI responses
Quantity	Varies	Evaluated	GPY1 EM&V analysis based on program tracking data and participant CATI responses
Verified Gross Savings per Unit Measure	Varies	Deemed and Evaluated (non-deemed measures)	State of Illinois TRM and GPY1 EM&V analysis based on program tracking data and IC Assumptions

Source: Navigant Analysis

3.1.4 Gross Program Impact Results

Measure Gross Unit Savings Verification and Adjustments

The evaluation team verified and adjusted the per unit savings values for measures in the sample and then applied the calculated realization rate to the population. Customers in the sample implemented the measures shown in Table 3-3. The difference between tracking unit savings and the verified values were not significant, but it is important that these minor differences are corrected as they could have a larger impact on the total gross savings for larger projects. Navigant recommends the IC update the tracking per unit savings values with the evaluation verified values.

¹⁶ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

Table 3-3. Profile of Measures and Gross Unit Savings in Sample

Measure Description	Tracking Ex-ante Unit Gross Savings (Therms)	Evaluation Verified Unit Gross Savings (Therms)	Verified Gross Unit Savings Realization Rate
Boiler Cutout/Reset Controls	1.170	1.163	0.994
Boiler tune-up	0.234	0.233	0.996
Boilers > 300 MBtu > 90% TE	1.617	1.615	0.999
Condensing Unit Heater	2.255	2.260	1.002
Energy Star Convection Oven	306.00	306.00	1.000
Furnace ≤225 MBH ≥92% AFUE	189.62	189.62	1.000
Furnace ≤225 MBH ≥95% AFUE	229.53	229.54	1.000
Programmable Thermostat	178.00	178.00	1.000
Steam trap repair/replacement	330.47	330.47	1.000

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking system 8-27-2012 extract.

Gross Impact Adjustments Triggered by the Participant Telephone Survey

A brief set of questions in the CATI survey was asked to support the savings verification gross impact evaluation, regarding installed measures, existence of maintenance contracts, removed equipment, and temperature settings for programmable thermostats. Table 3-4 identifies the measure-specific survey question or issue that was addressed, the participant responses, and conclusions.

Table 3-4. Participant Responses to CATI Impact Questions

Survey Question	Participant Responses	EM&V Conclusion
Prior to receiving this tune-up on your heating system through this program, when did you last tune up your heating equipment?	15 of 37 respondents had a boiler tune-up measure, and 10 out of 15 responded they performed a tune-up of their heating system within the past 3 years.	The Illinois TRM specifies the baseline condition that the facility cannot have had a tune-up within the past 36 months (3 years). The TRM was not final until AFTER the end of GPY1, and this criteria was not applicable for implementation in GPY1. No evaluation adjustments were made to GPY1 tune-up claimed savings. The program will need adequate screening of applications in order to ensure compliance with the TRM and qualification for incentives in GPY2 and GPY3.
Prior to receiving a tune-up through this program, did <COMPANY> have a maintenance contract for the heating system equipment?	Yes: 7 of 15 respondents said they had a maintenance contract for the heating system equipment. 6 respondents said No.	The Illinois TRM specifies the baseline condition that the facility cannot have a standing maintenance contract or tune-up within the past 36 months (3 years). The evaluation determined since this condition was applicable AFTER the start of the program year, the program should be given the savings credit for GPY1.
Did the <MEASD1> you installed through the C&I Prescriptive Rebate Program replace old or outdated equipment at this facility, or was it an addition of new equipment?	6 respondents indicated they replaced old or outdated equipment.	These measures were programmable thermostats for heating control. No adjustment was applied.
After installing the <MEASD1> device, have you or a contractor programmed the temperature settings?	Yes: All 6 respondents indicated they programmed the temperature settings	No indication if done by customer or contractor. Respondents met program requirement. No adjustment was applied.
Has the <MEASD1> been programmed to maintain a different temperature during unoccupied periods than occupied periods?	All 6 respondents said Yes.	No adjustment was applied.

Table 3-5 shows the primary measure type, the respondent count and the adjustment applied after reviewing the telephone survey responses. In GPY2, Navigant will include additional batteries to the survey guide to verify the quantity of each measure installed by survey participants.

Table 3-5. Participant Responses to CATI Impact Questions and Realization rates

Primary Measure Type	Respondent Count*	Verified Measure Count /Type Gross Savings RR
Boiler Cutout/Reset Controls	1	1.000
Boiler tune-up	15	1.000
Boilers > 300 MBtu > 90% TE	6	1.000
Condensing Unit Heater	1	1.000
Energy Star Convection Oven	1	1.000
Furnace ≤225 MBH ≥92% AFUE	2	1.000
Furnace ≤225 MBH ≥95% AFUE	5	1.000
Programmable Thermostat	6	1.000
Steam trap repair/replacement	7	1.000
Total	44	1.000

Navigant analysis of participant CATI survey responses (10-25-2012)

** Includes respondents who mentioned more than one measure.*

Using the methodology described in Section 2.3.1, we determined the verified gross savings for each sampled project. Table 3-6 presents the overall total verified gross savings of 184,520 therms for the sample of 37 projects, with a verified gross realization rate of 1.00. As mentioned above, since both Peoples Gas and North Shore Gas applied the same Illinois TRM savings assumptions and measure eligibility requirements, and considering that the evaluation did not meet the targeted sample of 70 for the participant survey, the sample for GPY1 did not consider utility type, hence the sample verified gross realization rate was applied to both utilities. In GPY2 we will consider exploring conditions separately for each utility.

Table 3-6. Gross Impact Realization Rate Results for the Prescriptive Sample

Sample (n)	Sample-Based Ex-ante Gross Savings Claimed	Sample-Based Verified Gross Savings	Sample-Based Verified Realization Rate
37	184,933	184,520	1.00 ¹⁷

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking system 8-27-2012 extract.

Realization Rates for the Prescriptive Program

Using a simple ratio estimation technique, we determined the sample gross realization of the verified gross savings versus the reported ex-ante gross savings, and analyzed the variance in

¹⁷ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

the ratio estimation of the gross realization rate to determine the confidence interval and precision. Details of the ratio estimation approach are discussed in Appendix 5.4. The standard error was used to estimate the error bound around the estimate of verified gross therms. The results are summarized in Table 3-7 below. The mean verified gross realization rate for the sample was 1.00 at 0.09% relative precision at 90% confidence level. A very low precision estimate was achieved based on the fact that, almost all the sampled projects had a realization rate close to 1.000, with very few variations in some projects. Thus, there was not much variation in the project level realization rates, resulting in the verified gross savings realization rate of 1.00 at the project level and at the program level.

Table 3-7. Gross Therms Realization Rate and Relative Precision at 90% Confidence Level

Sampling Strata	Relative Precision at 90% Level of Confidence (\pm %)	Low	Mean	High	Standard Error
Overall Verified Gross Savings RR	0.09%	0.997	1.00 ¹⁸	0.999	0.001

Navigant analysis

The sample 1.00 verified gross realization rate was applied to the population to achieve the program level verified gross savings as shown in Table 3-8. Overall, the reported ex-ante gross savings for Peoples Gas was adjusted 1,060 therms less, and 198 therms less for North Shore Gas.

Table 3-8. Gross Parameter and Savings Estimates at the Program Level

Program	Ex-ante Gross Energy Savings (Therms)	Verified Gross Energy Savings (Therms)	Verified Gross Realization Rate ¹⁹
Peoples Gas	529,545	528,485	1.00
North Shore Gas	99,134	98,936	1.00

Navigant analysis

Some general observations from the gross impact sample:

- The majority of respondents to the GPY1 CATI survey implemented boiler tune-ups within the last three years, and many indicated they had a maintenance contract for

¹⁸ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

¹⁹ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

the heating system equipment. In GPY2, the program will need to adequately screen applicants so that only those who had not implemented boiler tune-ups nor had maintenance contracts within the last three years qualify to receive incentives, as required in the Illinois TRM for realizing savings from boiler tune-up applications; and

- Adjustment factors that increased or decreased verified gross savings, depending on the project, include ex-ante deemed unit savings assumption not matching exactly verified deemed values from the TRM. We did not make quantity adjustments or baseline adjustments. These adjustments will be explored in GPY2 during on-site M&V.

3.1.5 Net Program Impact Parameter Estimates

As mentioned above, the NTGR for the GPY1 Prescriptive program was estimated using a customer self-report approach. This approach relied on responses provided by 37 program participants during the CATI telephone survey to determine the fraction of measure installations that would have occurred by participants in the absence of the program (free-ridership).

If the customer had additional projects at other sites covering the same end-use, the survey asks whether the responses also apply to the other projects. If that is the case, the additional projects are given the same NTG score and included in the sample. Table 3-9 shows the research findings net impact parameter estimates for GPY1. The same net program impact parameters were assumed for both Peoples Gas and North Shore Gas.

Table 3-9. GPY1 Research Findings Net Impact Parameter Estimates

Parameter	Value	Deemed or Evaluated?	Source Notes
		Verification Report	Verification Report
Participant Surveys	37	Evaluated	GPY1 EM&V analysis based on participant CATI responses
Free-ridership	0.57	Evaluated	GPY1 EM&V analysis based on participant CATI responses
Research Findings Overall NTG Ratio	0.43	Evaluated	GPY1 EM&V analysis based on participant CATI responses

Navigant analysis

A qualitative analysis of spillover was conducted for spillover candidates identified through the participant telephone survey. The evaluation team conducted qualitative analysis to find possible spillover estimates, which can be applied - now and in subsequent program years.

- Program participants were asked about any additional efficiency measure they may have installed since their participation, both at the participating facility and at any other facility within Peoples Gas or North Shore Gas service territory. Slightly over one-quarter of the participants responded that they had installed additional measures for which they did not receive any rebates. The installed measures included: a lighting control system, sealing air leaks, a tankless water heater, a variable speed air compressor, and EMS and HVAC controls. While several of the measures would not have been eligible for any rebates, when asked why they did not receive an incentive for these measures that may have been eligible, one participant mentioned that they were not aware of the availability of a rebate until after the participation deadline had passed and another mentioned that the rebate process was too burdensome.

When asked about whether or not their participation in the Peoples Gas or North Shore Gas Prescriptive Program influenced the adoption of additional energy efficiency measures, the majority reported that the effect of the program was minimal. All but one of the respondents who adopted additional measures reported that they were “very likely” to have done so had they not participated in the program. One participant did state that their positive experience with the program had an effect on their adoption of an additional energy efficient measure, and stated that they would have only been half as likely to adopt the additional measure had they not participated in the program.

The evaluation team conducted in-depth interviews with nine participating trade allies, and questioned them on any spillover effects that they may have witnessed in their unique position in the market as a result of the program. Of the nine contractors, six confirmed that there had been spillover (potentially) as a result of the program, where customers installed additional energy efficiency measures or adopted behaviors that would lead to energy use reduction. However, all claimed that increased adoption of energy efficient technologies would occur without the program, albeit not to the same extent. The most frequently mentioned energy efficient measure was pipe wrap, and several trade allies also mentioned increased ongoing maintenance as a result of the program. Of the six, one claimed more than 50% of their customers had additional spillover into other energy efficient measures, two with over 75% of their customers, and the remaining contractors claimed less than 25% of their customers. All contractors considered that some customers, who opted not to apply for a rebate, did so primarily because of the perceived additional difficulty incurred with the application process; however, none of the contractors could provide specific examples.

3.1.6 Net Program Impact Results

Once verified gross program impacts have been estimated, net program impacts are calculated by multiplying the verified gross realization rate estimate by the program research findings

NTGR. Table 3-10 provides the program gross savings and the net savings for Peoples Gas and North Shore Gas. The relative precision at a 90% confidence level is provided in Table 3-11. A net-to-gross ratio of 0.43 was estimated for the Prescriptive Program at a relative precision of 9% at a 90% confidence level. Detail of the NTGR methodology and estimation from the telephone survey are provided in Appendix 5.2.

Table 3-10. GPY1 Program Gross and Net Energy Savings Estimates

Program	Ex-ante Gross Energy Savings (Therms)	Verified Gross Energy Savings (Therms)	Verified Gross Realization Rate ²⁰	Research Findings Net Energy Savings (Therms)	Research Findings Net-to-Gross Ratio
Peoples Gas	529,545	528,485	1.00	227,249	0.43
North Shore Gas	99,134	98,936	1.00	42,542	0.43

Source: Navigant analysis.

Table 3-11. NTG Ratio and Relative Precision at 90% Confidence Level

Project Population (N=137)	NTG Interviews (n=37)	NTG Sample * (n=40)	Relative Precision (± %)	Low	NTGR (Mean)	High
137	37	40	9%	0.39	0.43	0.47

Source: Navigant analysis.

This included participants with multiple projects but same decision to implement measures.

Participants or projects with low NTG ratios include those who primarily installed boilers greater than 90% thermal efficiency. These projects had an average NTGR of 0.369 (from 6 out of 13 projects). Projects with boiler tune-ups had an average NTGR of 0.473 (from 14 out of 57 projects). Projects with steam trap repair/replacement measures had an average NTGR of 0.498, based on a sample size of 4 out of 14 projects.

Comparing initial program planning net therms savings estimates with evaluation research findings net therms savings, Navigant found that Peoples Gas achieved 41% of the initial planned savings for the Prescriptive Program, and North Shore Gas achieved 38% of its planning net therms savings, as indicated in Table 3-12.

Table 3-12. GPY1 Verified Net Energy Savings vs. Planned Net Savings

Program	Verified Net Therms Achieved	GPY1 Planned Net Therms*	% Net Therms Achieved
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²⁰ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

Peoples Gas	227,249	548,518	41%
North Shore Gas	42,542	113,396	38%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

*Source: Integrus EE Plan Compliance Filing (June 2011)

3.2 Process Evaluation Results

The process component of the Prescriptive Program evaluation focused on:

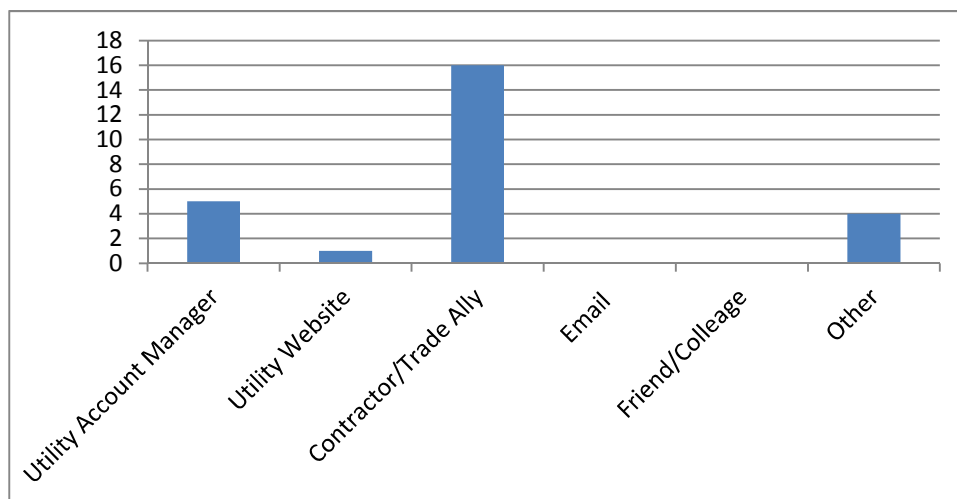
- Marketing and Participation
- Program Characteristics and Barriers to Participation
- Administration and Delivery
- Program Satisfaction

The process evaluation results are organized by the process research questions that are grouped by process themes. The primary data sources for the process evaluation included the telephone survey with 37 survey participants and in-depth interviews with market actors and implementation staff.

3.2.1 Marketing and Participation

As shown in Figure 3-1, the majority of survey respondents (16) reported that they were first made aware of the program by their contractor or by a trade ally. An additional five participants reported that they learned of the program through a utility account manager or representative. Only one respondent reported that they were first made aware of the program through their exposure to the utility program website.

Figure 3-1. Method of Initial Introduction to Program



Program participants who responded to the participant survey reported very favorable responses to the program marketing materials they had been exposed to. Approximately 37% reported that the marketing materials were “very useful” and an additional 30% reported that they were “useful”. Several of the respondents did report that they did not recall receiving any marketing materials.

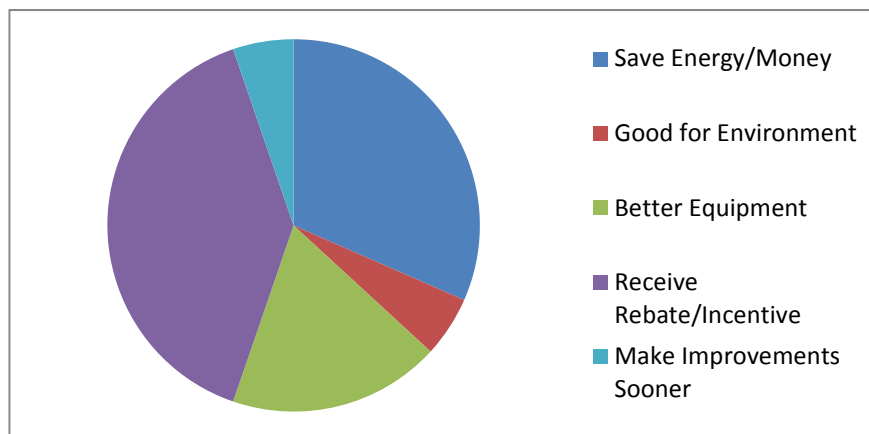
When asked what the best of way of reaching potential program participants with information about energy efficiency opportunities like the C&I Rebate programs, the most cited method was e-mail, with 44% of respondents suggesting it as a method, followed by bill inserts, which were mentioned by 30% of respondents.

While nearly all the survey respondents used a contractor for their program project, 58% reported that they did not know if their contractor was a program-qualified trade ally. Only 32% of the survey respondents reported that they did use a program-qualified trade ally. This suggests that the trade allies may not be promoting their status as program-qualified trade allies to the fullest extent possible. When asked to rate how important it is that their contractor is a program trade ally, on a scale from zero to ten, where zero is “not at all important” and ten is “very important”, the average rating was 5.6. However, one-third of the respondents reported a rating of greater than seven.

3.2.2 Program Characteristics and Barriers to Participation

Program participants were asked about what they perceive to be the main benefits of participation in the program, and the top two responses were the program rebate (56% of respondents) and energy savings (44% of respondents). Also mentioned was the ability to install new and/or better equipment (26% of respondents).

Figure 3-2. Primary Benefit of Program Participation



When asked about the drawbacks to participating in the program, 11% of participants reported that the program paperwork was too burdensome, and a few respondents cited the uncertainty

of receiving a rebate as an issue. Since the program requires that the measures be installed before a rebate is issued, the perceived uncertainty of whether or not the participant will actually receive the rebate is a potential barrier to increased participation. One method of overcoming this barrier would be to conduct a “pre-installation” review that would act as a pre-qualifying step in the application process. For example, if a customer is unsure whether they qualify to participate in the program, they would contact the IC who would conduct a review of the proposed project prior to installation to determine eligibility.

3.2.3 Administration and Delivery

As part of the participant survey, respondents were asked about their experiences with the program materials, and program and implementation staff.

Over three-fourths of the survey respondents reported that they themselves filled out the program application. Of those, over 80% reported that the application clearly explained the program requirements and how to participate. When asked to rate the application process on a scale from zero to ten, where zero is “very difficult” and ten is “very easy”, the average score was 7.8. Several respondents did give the application process a score of less than four, and the reasons they cited were that the application process was too long and was difficult to understand.

Slightly over 22% of the survey respondents recalled placing telephone calls to the Program Call Center. Of those who did, they all reported very high levels of satisfaction with the Program Call Center. On a scale of zero to ten, where zero is “not at all satisfied” and ten is “very satisfied”, the average satisfaction score was 9.2.

3.2.4 Program Satisfaction

When asked to rate their overall satisfaction with the Prescriptive Program, the average reported score was 8.8 (on the same zero to ten scale). Also, 55% of participants rated their satisfaction with the program at a ten, and no participants rated their satisfaction level as less than four.

The program participants were asked about their satisfaction with the incentive amount, using a scale of zero to ten, where zero is “not at all satisfied” and ten is “very satisfied.” The average respondent reported being quite satisfied with the incentive amount and the average satisfaction score was 8.2. Slightly more than half of the participants reported a satisfaction score of ten. Only 7% of respondents reported a satisfaction score of less than 4, with the reason being that they thought the incentive was too small.

When asked if they plan to participate in the program in the future, nearly 90% of participants responded in the affirmative. When asked if they had any suggestions for improving the program, most participants offered no specific suggestions, but among those who did, the most

common suggestion was to increase the publicity that the program receives. Also mentioned by several respondents was increasing the incentive levels and improved information about the program. A couple of participants mentioned simplifying the application process as a suggestion, and one participant mentioned that they would suggest a quicker rebate processing time.

3.2.5 Trade Ally Survey Results

The trade ally survey component of the Prescriptive Program evaluation focused on:

- Marketing and Participation
- Program Characteristics and Barriers to Participation
- Administration and Delivery
- Program Satisfaction

The evaluation results are organized by the same process research questions that are grouped by the above themes. The primary data sources include the telephone survey with nine trade allies.

Marketing and Outreach Efforts

Trade ally contractors were asked a series of questions regarding program-specific marketing, marketing effectiveness, and suggested changes to reach a targeted audience. Trade allies were generally aware of other Peoples Gas and North Shore Gas programs, but only two out of nine actively mentioned these programs when directly speaking with their customers. However, when probed further all respondents indicated that if customers were interested in additional programs, they would refer them to the website or would know of those programs already. Out of the nine trade allies, one indicated that the level of marketing material was insubstantial and more was needed, contradicting the other eight who all considered that the level was appropriate. Of those eight trade allies, however, four considered that the marketing material could be better targeted or targeted more strategically. When probed further these respondents were unable to determine the best strategy of execution.

Though contractors are satisfied with marketing overall, there were several suggestions for marketing improvements:

- The inclusion of more energy saving case studies as a direct result of the program;
- Addressing safety concerns that the program indirectly achieves, but are not necessarily widely known;
- The need to address some smaller businesses and customers concerns regarding motives of the utilities and their promotion of energy conservation - indicating a limited understanding of the program's merits and financing; and

- Prior to printing, some space should be left for contractors' to fill with their value-added and additional services alongside the program.

Furthermore, the program overall may benefit from including contractors' input in outreach material development. The basis of this is that their unique experience in addressing misunderstandings and questions of customers directly will assist in a comprehensive program and its development.

Program Characteristics and Barriers to Participation

Trade allies had multiple and varied responses to the program's characteristics and how it could overcome barriers to participation. These included:

- Making information clearer on marketing material and on the website, particularly about the type of qualified equipment;
- Providing a "cheat sheet" to show customers the expected savings, in order to curtail unrealistic expectations;
- Improve program promotion on customers' bills, particularly highlighting the energy efficiency fund that they are already paying into, so customers' realize that it's worth their time investigating available rebates; and
- Open discussions with equipment experts to potentially include rebates for equipment that does not currently qualify, such as steam traps in the closed position.

Administration and Delivery

All nine trade allies actively market the program when speaking with their customers; however they do not target specific geographic areas. Seven out of the nine trade allies do not partner with any sub-contractors and perform all the work themselves, including the rebate application. The trade allies provided a wide timeframe between when a customer agrees to an installation after recommendations to when a scheduled installation takes place, generally between two weeks and three months; however it is dependent on the type of equipment and manufacturer. Generally, all trade allies thought that the level of training offered by Peoples Gas and North Shore Gas to contractors was adequate; with one trade ally highlighting that in-house training was a direct result of the Peoples Gas and North Shore Gas training. Processing of payments rated very positively amongst all trade allies, who indicated that the receipt of payment within a month was appropriate.

Program Satisfaction

All trade allies were satisfied by the program and its role in their businesses. Some trade allies indicated although they found it initially confusing, the program has become an asset to their sales pitch and has, in some instances, boosted their sales. The trade allies also unanimously agreed that the program has given them an increased level of customer service to offer their customers without compromising services in other areas of their business.

Again, the trade allies were unanimous in their positive reflections of the implementers' pre and post inspections of the installations. All indicated that inspections were conducted in a timely manner and do not present a barrier to participation or burden on customers. Further, the inspections do not delay installations or payments; however, one respondent did mention that at first they found Franklin Energy difficult to work. When probed further, the trade allies stated that the initial issues have since been resolved, and subsequently does not expect them to arise again.

4. Findings and Recommendations

4.1 Key Impact Findings and Recommendations

The primary impact findings and recommendations are as follows:

Finding: The evaluation team performed an independent verification of the program tracking database to determine whether the database included an appropriate level of input, outliers, and potentially missing variables. The IC provided unit measure savings estimates for program qualifying measures. Navigant performed a review and verification of the algorithms and assumptions. Our estimates from the TRM were almost the same as those provided in the IC's documentation, although some measures' per unit values did not match exactly, this is possibly due to rounding differences.

Recommendations:

- The IC should minimize rounding errors when applying the estimated measure deemed savings (from the *Master Measure Document*) to the tracking system
- The tracking system should have a field that indicates the measure unit savings, as well as the unit of measurement. The tracking data can have rebate quantity (physical measure count) and also savings quantity (which for boiler measures could be recorded in MBH);
- The IC should ensure updates of the tracking system for GPY2 include capturing data for measure end-use (e.g., process or space heating) and participant business type that evaluation will need to verify savings defined by the TRM;
- The IC should include in the tracking system the zip code or county lookup information for weather dependent program measures; and
- The tracking system should include project/measure specific information for boilers and furnaces, such as input capacity and efficiencies.

Finding: Fifteen out of thirty-seven (41%) respondents to the GPY1 CATI survey implemented boiler tune-ups, and 10 out of 15 indicated they had a previous tune-up within the last three years. Many of these (7/15 or 47%) indicated they had a maintenance contract for the heating system equipment.

Recommendation:

- In GPY2, the Prescriptive Program will need to screen applicants so that only those who had not implemented boiler tune-ups nor had maintenance contracts within the last three years qualify to receive incentives, as required in the Illinois TRM for realizing savings from boiler tune-up applications.

Finding: Several participants demonstrated high free-ridership, contributing to the low overall NTG ratio, although sample sizes were on the low side in most cases to draw any broad-ranging conclusions about specific results. Participants or projects with low NTG ratios included those who installed boilers greater than 90% thermal efficiency. These projects had an average NTGR of 0.38 (from 6 out of 13 projects). Projects with boiler tune-ups had an average NTGR of 0.47 (from 14 out of 57 projects). Projects with steam trap repair/replacement measures had an average NTGR of 0.50, based on a sample size of 4 out of 14 projects.

The majority of participants who installed steam trap measures, boilers or performed boiler tune-ups indicated strong likelihood that they would have installed the same equipment without the program. Overall, 51% of the 37 respondents indicated extreme likelihood of installing the same equipment without the program, mostly citing equipment age and maintenance issues as strong basis for implementing measure, with moderate indication of program influence. One participant said “the incentive is important, but the maintenance and upkeep of the equipment is important as well, and that we would have done the same thing without the incentive.” Another participant said “I would have done this project anyway because I am aware of the need for energy efficiency systems.”

Recommendation:

- If the findings in the above trends persist through GPY3 and a larger sample is obtained through the Participant Survey, the Prescriptive Program should consider expanding marketing and outreach to encourage broader participation by C&I customers in equipment measures, while screening boiler tune-up measures as indicated above.

4.2 Key Process Findings and Recommendations

The primary process findings and recommendations are as follows:

Finding: The majority of survey respondents (59%) reported that they were first made aware of the program by their contractor or by a trade ally. An additional 19% reported that they learned of the through a utility account manager or representative. Only 4% or respondents reported that they were first made aware of the program through their exposure to the utility program website. When asked what the best way of reaching potential program participants with information about energy efficiency opportunities like the Prescriptive Program, the most cited method was e-mail, with 44% of respondents suggesting it as a method, followed by bill inserts, which were mentioned by 30% of respondents.

Recommendation:

- Navigant suggests increasing the distributing of program information via email and/or bill inserts to customers.

Finding: While nearly all the survey respondents used a contractor for their program project, 58% reported that they did not know if their contractor was a program-qualified trade ally or not. Only 32% of the survey respondents reported that they did use a program trade ally. This suggests that the trade allies may not be promoting their status as program-qualified trade allies to the fullest extent possible. When asked to rate how important it is that their contractor is a program trade ally, on a scale from zero to ten, where zero is “not at all important” and ten is “very important”, the average rating was 5.6. However, one-third of the respondents reported a rating of greater than seven.

Recommendation:

- Encourage trade allies to promote their program-qualified status to participating and potential customers.

Finding: When asked about the drawbacks to participating in the program, 11% of participants reported that the program paperwork was too burdensome, and a few respondents cited the uncertainty of receiving a rebate as an issue. Since the program requires that the measures be installed before a rebate is issued, the perceived uncertainty of whether or not the participant will actually receive the rebate is a potential barrier to increased participation.

Recommendation:

- One method of overcoming this barrier would be to institute a “pre-installation” review that would act as a pre-qualifying step in the application process. For example, if a customer is unsure whether they qualify to participate in the program, they would contact the IC who would conduct a review of the proposed project prior to installation to determine eligibility.

Finding: Contractors were satisfied with the program and its role in their businesses. Some contractors indicated although they found it initially confusing, the program has become an asset and has, in some instances, boosted their sales. Contractors also unanimously agreed that the program has given them an increased level of customer service to offer their customers without compromising services in other areas of their business. Again, contractors were unanimous in their positive reflections of the IC’s pre and post inspections of the installations. Four of the nine contractors interviewed considered that the marketing material could be better targeted or targeted more strategically.

Recommendation:

- The program may benefit from including contractors’ input in outreach material development. The basis of this is that their unique experience in addressing



misunderstandings and questions of customers directly will assist in a comprehensive program and its development.

5. Appendix

5.1 Glossary

5.1.1 High Level Concepts

Program Year

- EPY1, EPY2, etc. Electric Program Year where EPY1 is June 1, 2008 to May 31, 2009, EPY2 is June 1, 2009 to May 31, 2010, etc.
- GPY1, GPY2, etc. Gas Program Year where GPY1 is June 1, 2011 to May 31, 2012, GPY2 is June 1, 2012 to May 31, 2013.

There are two main tracks for reporting impact evaluation results, called Verified Savings and Impact Evaluation Research Findings.

Verified Savings composed of

- **Verified Gross Energy Savings**
- **Verified Gross Demand Savings**
- **Verified Net Energy Savings**
- **Verified Net Demand Savings**

These are savings using deemed savings parameters when available and after evaluation adjustments to those parameters that are subject to retrospective adjustment for the purposes of measuring savings that will be compared to the utility's goals. Parameters that are subject to retrospective adjustment will vary by program but typically will include the quantity of measures installed. In GPY1 Peoples Gas and North Shore Gas's deemed parameters were defined in its filing with the ICC²¹. The Gas utilities agreed to use the parameters defined in the TRM, which came into official force for EPY5/GPY2.

Application: When a program has deemed parameters then the Verified Savings are to be placed in the body of the report. When it does not (e.g., Custom Rebate and Retro-Commissioning Programs), the evaluated impact results will be the Impact Evaluation Research Findings.

Impact Evaluation Research Findings composed of

- **Research Findings Gross Energy Savings**
- **Research Findings Gross Demand Savings**
- **Research Findings Net Energy Savings**
- **Research Findings Net Demand Savings**

²¹ North Shore Gas/Peoples Gas Compliance Filing Energy Efficiency Program Plan, June 1, 2011 – May 31, 2014 at the ICC, June 2011, Docket 10-0564 Attachment A.pdf

These are savings reflecting evaluation adjustments to any of the savings parameters (when supported by research) regardless of whether the parameter is deemed for the verified savings analysis. Parameters that are adjusted will vary by program and depend on the specifics of the research that was performed during the evaluation effort.

Application: When a program has deemed parameters then the Impact Evaluation Research Findings are to be placed in an appendix. That Appendix (or group of appendices) should be labeled Impact Evaluation Research Findings and designated as “ER” for short. When a program does not have deemed parameters (e.g., Custom Rebate and Retro-Commissioning Programs), the Research Findings are to be in the body of the report as the only impact findings. (However, impact findings may be summarized in the body of the report and more detailed findings put in an appendix to make the body of the report more concise.)

5.1.2 Program-Level Savings Estimates Terms

N	Term Category	Term to Be Used in Reports‡	Application†	Definition	Otherwise Known As (terms formerly used for this concept)§
1	Gross Savings	Ex-ante gross savings	Verification and Research	Savings as recorded by the program tracking system, unadjusted by realization rates, free ridership, or spillover.	Tracking system gross
2	Gross Savings	Evaluation-verified gross savings	Verification	Gross program savings after applying adjustments based on evaluation findings for only those items subject to verification review for the Verification Savings analysis	Ex post gross, Evaluation adjusted gross
3	Gross Savings	Evaluation-Verified gross realization rate	Verification	Verified gross / tracking system gross	Realization rate
4	Gross Savings	Research findings gross savings	Research	Gross program savings after applying adjustments based on all evaluation	Evaluation-adjusted ex post gross savings

N	Term Category	Term to Be Used in Reports‡	Application†	Definition	Otherwise Known As (terms formerly used for this concept)§
				findings	
5	Gross Savings	Research Findings gross realization rate	Research	Research findings gross / ex-ante gross	Realization rate
6	Gross Savings	Evaluation-Adjusted gross savings	Non-Deemed	Gross program savings after applying adjustments based on all evaluation findings	Evaluation-adjusted ex post gross savings
7	Gross Savings	Gross realization rate	Non-Deemed	Evaluation-Adjusted gross / ex-ante gross	Realization rate
1	Net Savings	Net-to-Gross Ratio (NTGR)	Verification and Research	1 – Free Ridership + Spillover	NTG, Attribution
2	Net Savings	Evaluation-verified net savings	Verification	Evaluation-verified gross savings * NTGR	Ex post net
3	Net Savings	Research Findings net savings	Research	Research findings gross savings * NTGR	Ex post net
4	Net Savings	Evaluation Net Savings	Non-Deemed	Evaluation-Adjusted gross savings * NTGR	Ex post net
5	Net Savings	Ex-ante net savings	Verification and Research	Savings as recorded by the program tracking system, after adjusting for realization rates, free ridership, or spillover and any other factors the program may choose to use.	Program-reported net savings

‡ “Energy” and “Demand” may be inserted in the phrase to differentiate between energy (kWh, Therms) and demand (kW) savings.

† **Verification** = Verified Savings; **Research** = Impact Evaluation Research Findings; **Non-Deemed** = impact findings for programs without deemed parameters. We anticipate that any one report will either have the first two terms or the third term, but never all three.

§ Terms in this column are not mutually exclusive and thus can cause confusion. Because of that they should not be used in the reports (unless they appear in the “Terms to be used in Reports” column).

5.1.3 Individual Values and Subscript Nomenclature

The calculations that compose the larger categories defined above are typically composed of individual parameter values and savings calculation results. Definitions for use in those components, particularly within tables, are as follows:

Deemed Value – a value that has been assumed to be representative of the average condition of an input parameter and documented in the Illinois TRM or Peoples Gas and North Shore Gas approved deemed values. Values that are based upon a deemed measure shall use the superscript “D” (e.g., delta watts^D, HOU-Residential^D).

Non-Deemed Value – a value that has not been assumed to be representative of the average condition of an input parameter and has not been documented in the Illinois TRM or Peoples Gas and North Shore Gas approved deemed values. Values that are based upon a non-deemed, researched measure or value shall use the superscript “E” for “evaluated” (e.g., delta watts^E, HOU-Residential^E).

Default Value – when an input to a prescriptive saving algorithm may take on a range of values, an average value may be provided as well. This value is considered the default input to the algorithm, and should be used when the other alternatives listed for the measure are not applicable. This is designated with the superscript “DV” as in X^{DV} (meaning “Default Value”).

Adjusted Value – When a deemed value is available and the utility uses some other value the evaluation subsequently adjusts this value. This is designated with the superscript “AV” as in X^{AV}

5.1.4 Incorporated From the TRM

Measure Type: Measures are categorized into two subcategories: custom and prescriptive.

Custom: Measures whose energy savings algorithm and/or inputs, or metering results apply only to the individual customer who is implementing them and has no deemed measure.

Prescriptive: Measures whose energy savings algorithm and inputs are fixed within the TRM and may not be changed by the Program Administrator. Two subcategories of prescriptive measures are included in the Illinois TRM:

Fully Deemed: Measures whose savings are expressed on a per unit basis in the TRM and are not subject to change or choice by the Program Administrator.

Partially Deemed: Measures whose energy savings algorithms are deemed in the TRM, with input values that may be selected to some degree by the Program Administrator.

5.2 Detailed Impact Results

Through May 31, 2012, the Prescriptive Program reported an estimated ex-ante gross savings of 529,545 therms for Peoples Gas, through the installation of 887 measures (from 106 projects) that satisfied the program requirements²², and achieved 52% of GPY1 planned gross savings estimate. Similarly, North Shore Gas reported an estimated ex-ante gross savings of 99,134 therms, through installation of 96 measures (from 31 projects), and achieved 48% of GPY1 planned gross savings.

Table 5-1 provides details of the reported ex-ante gross savings estimates for Peoples Gas and North Shore Gas, compared with initial program planning goals. In total, 983 measures were installed by customers from both utilities, with a total of \$340,870 incentives being paid. These estimates do not include measures identified in the August 27, 2012 tracking database that had not yet completed final paperwork as of May 31, 2012. Savings from these measures were not claimed in GPY1 by Peoples Gas and North Shore Gas.

Table 5-1. GPY1 C&I Prescriptive Program Participation and Gross Savings Estimates

Program	Projects	Incentive Amount (\$)	Ex-ante Gross Energy Savings (Therms)	GPY1 Gross Energy Savings Goals (Therms)*	% Gross Savings Goal Achieved
Peoples Gas	106	232,641	529,545	1,019,774	52%
North Shore Gas	31	108,229	99,134	208,406	48%
Total	137	340,870	628,679	1,228,180	51%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

*Source: Integritys EE Plan Compliance Filing (June 2011) at the ICC.

Table 5-2 and Table 5-3 show the reported installed measures by end-use type and the distribution of ex-ante gross savings by end-use compared with initial planning goals. These

²² Measures marked as “included” in the August 27, 2012 tracking data extract were assumed to have met program eligibility requirement, and were included in the GPY1 population for the ex-ante gross impact analysis.

tables indicate HVAC measures contributed most of the GPY1 savings. For Peoples Gas, 29% of expected HVAC measure installations accounted for about 66% of planned gross savings. For North Shore Gas, 13% of HVAC measure installations accounted for 56% expected GPY1 gross savings.

Table 5-2. Peoples Gas - GPY1 C&I Prescriptive Rebate Program Participation by End-use

End-Use	Reported Installed Measures	GPY1 Measure Goal	% Measure Goal Achieved	Ex-ante Gross Energy Savings (Therms)	GPY1 Energy Savings Goal (Therms)*	% GPY1 Savings Goal Achieved
Appliances	17	220	8%	9,774	180,664	5%
HVAC	869	2,980	29%	519,653	785,650	66%
Water Device	1	330	<1%	118	53,460	<1%
Total	887	3,530	25%	529,545	1,019,774	52%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

*Source: Integrys EE Plan Compliance Filing (June 2011) at the ICC.

Table 5-3. North Shore Gas - GPY1 C&I Prescriptive Rebate Program Participation by End-use

End-Use	Reported Installed Measures	GPY1 Measure Goal	% Measure Goal Achieved	Ex-ante Gross Energy Savings (Therms)	GPY1 Energy Savings Goal (Therms)*	% GPY1 Savings Goal Achieved
Appliances	15	50	30%	11,272	41,060	27%
HVAC	78	590	13%	87,509	156,006	56%
Water Device	3	70	4%	354	11,340	3%
Total	96	710	14%	99,134	208,406	48%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

*Source: Integrys EE Plan Compliance Filing (June 2011) at the ICC.

Details of the GPY1 measures and the contributing gross savings estimates are provided in Table 5-4 and Table 5-5. In Peoples Gas territory, boiler measures, including boiler installations, boiler tune-ups and boiler cutout/reset controls, accounted for 59% of the 529,545 therms ex-ante gross savings for GPY1. Steam trap repairs/replacement measures accounted for 30% of total savings. Eight percent of savings came from installation of programmable thermostats.

Table 5-4. Peoples Gas Prescriptive Program Participation and Savings by Measure

GPY1 Measures	Reported Installed Measures	GPY1 Measure Goal	% Measure Goal Achieved	Ex-ante Gross Energy Savings	GPY1 Energy Savings Goal	% GPY1 Savings Goal Achieved
Boiler Cutout/Reset Controls	6	210	3%	15,283	11,550	132%
Boiler tune-up	114	630	18%	256,798	190,890	135%
Boilers < 300 MBtu > 90% AFUE	1	210	0%	384	46,200	1%
Boilers > 300 MBtu >85% TE	2	20	10%	2,340	22,560	10%
Boilers > 300 MBtu > 90% TE	12	40	30%	39,617	63,920	62%
Energy Star Convection Oven	6	22	27%	1,836	7,106	26%
Energy Star Fryer	9	22	41%	4,572	11,110	41%
Energy Star Steamer	2	22	9%	3,366	45,848	7%
Furnace ≤225 MBH ≥92% AFUE	2	90	2%	379	24,300	2%
Furnace ≤225 MBH ≥95% AFUE	20	110	18%	4,534	35,310	13%
Water Heater .67 EF	2	60	3%	296	3,420	9%
Pre Rinse Sprayers	1	330	0%	118	53,460	0%
Programmable Thermostat	227	350	65%	40,406	62,300	65%
Steam trap repair/replacement	483	970	50%	159,616	265,780	60%
Total	887	3,086	29%	529,545	843,754	63%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

*Source: Integrys EE Plan Compliance Filing (June 2011) at the ICC.

In North Shore Gas territory, boiler measures, including installation of high efficiency 300 MBtu > 90% TE boilers, boiler tune-ups and boiler cutout/reset controls, accounted for 75% of the 99,134 therms ex-ante gross savings for GPY1. Appliances contributed 11% of total gross savings (mostly from infrared broilers). Five percent of gross savings were attributable to steam trap repairs/replacement measures.

Table 5-5. North Shore Gas Prescriptive Program Participation and Savings by Measure

GPY1 Measures	Reported Installed Measures	GPY1 Measure Goal	% Measure Goal Achieved	Ex-ante Gross Energy Savings	GPY1 Energy Savings Goal	% GPY1 Savings Goal Achieved
Boiler Cutout/Reset Controls	6	40	15%	3,218	2,200	146%
Boiler tune-up	21	130	16%	41,976	39,390	107%
Boilers < 300 MBtu > 90% AFUE	1	40	3%	585	8,800	7%
Boilers > 300 MBtu > 90% TE	5	8	63%	28,781	12,784	225%
Energy Star Convection Oven	3	5	60%	918	1,615	57%
Energy Star Fryer	2	5	40%	1,016	2,525	40%
Furnace ≤225 MBH ≥92% AFUE	3	20	15%	569	5,400	11%
Furnace ≤225 MBH ≥95% AFUE	2	20	10%	459	6,420	7%
Infrared Charbroiler	3	5	60%	1,983	3,305	60%
Infrared Salamander Broiler	1	5	20%	239	1,195	20%
Infrared Upright Broiler	4	5	80%	4,356	5,445	80%
Pasta Cooker	2	5	40%	2,760	6,900	40%
Pre Rinse Sprayers	3	70	4%	354	11,340	3%
Programmable Thermostat	24	70	34%	4,272	12,460	34%
Steam trap repair/replacement	14	190	7%	4,627	52,060	9%
Condensing Unit Heater	2	40	5%	3,022	10,640	28%
Total	96	658	15%	99,134	182,479	54%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

*Source: Integrys EE Plan Compliance Filing (June 2011) at the ICC.

From Table 5-6 and Table 5-7, we compared the ex-ante gross and ex-ante net savings distribution by each measure type. Note that for the boiler measures, the unit quantities are presented by boiler capacity in MBH. For Peoples Gas, boiler tune-up and steam trap repairs/replacement measures were the major contribution to GPY1 savings, providing 48% and 30% respectively of the total ex-ante gross savings.

Table 5-6. Peoples Gas – Reported Ex-ante Gross and Net Savings Impact by Measure Type

Measure	Unit	Reported Installed Measures	Ex-ante Gross Savings/ Unit	Ex-ante Gross Energy Savings	%	Ex-ante NTG Ratio	Ex-ante Net Energy Savings	%
Boiler Cutout/Reset Controls	MBH	13,060	1.17	15,283	3%	0.47	7,183	3%
Boiler tune-up	MBH	1,097,226	0.23	256,798	48%	0.47	120,695	48%
Boilers < 300 MBtu > 90% AFUE	MBH	196	1.96	384	0%	0.47	180	0%
Boilers > 300 MBtu > 90% TE	MBH	24,500	1.62	39,617	7%	0.47	18,620	7%
Boilers > 300 MBtu > 85% TE	MBH	2,750	0.85	2,340	0%	0.47	1,100	0%
Energy Star Convection Oven	Oven	6	306	1,836	0%	0.76	1,395	1%
Energy Star Fryer	Fryer	9	508	4,572	1%	0.76	3,475	1%
Energy Star Steamer	Steamer	2	1,683	3,366	1%	0.76	2,558	1%
Furnace ≤225 MBH ≥92% AFUE	Furnace	2	190	379	0%	0.47	178	0%
Furnace ≤225 MBH ≥95% AFUE	Furnace	20	230	4,534	1%	0.47	2,131	1%
Pre Rinse Sprayers	Sprayer	1	118	118	0%	0.76	90	0%
Programmable Thermostat	Thermostat	227	178	40,406	8%	0.47	18,991	8%
Steam Trap Repair/Replacement	Steam Trap	483	330	159,616	30%	0.47	75,020	30%
Water Heater .67 EF	Water Heater	2	148	296	0%	0.76	225	0%
Totals				529,545	100%		251,840	100%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

For North Shore Gas, boiler tune-up and Boilers > 300 MBtu > 90% TE measures were the major contribution to GPY1 savings, providing about 42% and 29% respectively of the total ex-ante gross savings.

Table 5-7. North Shore Gas – Reported Ex-ante Gross and Net Savings Impact by Measure Type

Measure	Unit	Reported Installed Measures	Ex-ante Gross Therms/Unit	Ex-ante Gross Energy Savings (Therms)	%	Ex-ante NTG Ratio	Ex-ante Net Energy Savings (Therms)	%
Boiler Cutout/Reset Controls	MBH	2,750	1.17	3,218	3.2%	0.47	1,512	3.0%
Boiler tune-up	MBH	179,351	0.23	41,976	42.3%	0.47	19,729	39.5%
Boilers < 300 MBtu > 90% AFUE	MBH	299	1.96	585	0.6%	0.47	275	0.6%
Boilers > 300 MBtu > 90% TE	MBH	17,799	1.62	28,781	29.0%	0.47	13,527	27.1%
Condensing Unit Heater	MBH	1,340	2.26	3,022	3.0%	0.47	1,420	2.8%
Energy Star Convection Oven	Oven	3	306	918	0.9%	0.76	698	1.4%
Energy Star Fryer	Fryer	2	508	1,016	1.0%	0.76	772	1.5%
Furnace ≤225 MBH ≥92% AFUE	Furnace	3	190	569	0.6%	0.47	267	0.5%
Furnace ≤225 MBH ≥95% AFUE	Furnace	2	230	459	0.5%	0.47	216	0.4%
Infrared Charbroiler	Broiler	3	661	1,983	2.0%	0.76	1,507	3.0%
Infrared Salamander Broiler	Broiler	1	239	239	0.2%	0.76	182	0.4%
Infrared Upright Broiler	Broiler	4	1,089	4,356	4.4%	0.76	3,311	6.6%
Pasta Cooker	Cooker	2	1,380	2,760	2.8%	0.76	2,098	4.2%
Pre Rinse Sprayers	Sprayer	3	118	354	0.4%	0.76	269	0.5%
Programmable Thermostat	Thermostat	24	178.00	4,272	4.3%	0.47	2,008	4.0%
Steam Trap Repair/Replacement	Steam Trap	14	330	4,627	4.7%	0.47	2,174	4.4%
Totals				99,134	100%		49,965	100%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)

5.2.1 Detailed NTG Calculations

The primary objective of the net savings analysis for the Prescriptive Program was to determine the program's net effect on customers' natural gas usage. After gross program impacts have been assessed, net program impacts are derived by estimating a NTGR that quantifies the percentage of the gross program impacts that can be reliably attributed to the program.

For GPY1, the net program impacts were quantified from the estimated level of free-ridership and participant spillover. Quantifying free-ridership requires estimating what would have happened in the absence of the program. A customer self-report method, based on data gathered during participant telephone interviews, was used to estimate the free-ridership for this evaluation. The existence of participant spillover is examined by identifying spillover candidates through questions asked in the participant telephone interviews. If response data provided evidence of participant spillover and the participant is willing to have a follow-up interview by an engineer, an attempt is made to quantify the spillover impacts.

Once free-ridership and participant spillover has been estimated, the NTGR is calculated as follows:

$$\text{NTGR} = 1 - \text{Free-ridership Rate} + \text{Participant Spillover}$$

Basic Rigor Free-Ridership Assessment

Free-ridership was assessed using a customer self-report approach following a framework that was developed for evaluating net savings of California's 2006-2008 nonresidential energy efficiency programs. This method calculates free-ridership using data collected during participant telephone interviews concerning the following three items:

- A **Timing and Selection** score that reflected the influence of the most important of various program and program-related elements in the customer's decision to select the specific program measure at this time;
- A **Program Influence** score that captured the perceived importance of the program (whether rebate, recommendation, or other program intervention) relative to non-program factors in the decision to implement the specific measure that was eventually adopted or installed. This score is cut in half if they learned about the program after they decided to implement the measures; and
- A **No-Program** score that captures the likelihood of various actions the customer might have taken at this time and in the future if the program had not been available. This score accounts for deferred free-ridership by incorporating the likelihood that the customer would have installed program-qualifying measures at a later date if the program had not been available.

Each of these scores represents the highest response or the average of several responses given to one or more questions about the decision to install a program measure. The rationale for using the maximum value is to capture the most important element in the participant's decision making. This approach and scoring algorithm were identical to that used for the ComEd and Ameren Illinois C&I rebate programs.

Standard Rigor Free-Ridership Assessment

Additional survey batteries examine other project decision-making influences including the vendor, age, and condition of existing equipment, corporate policy for efficiency improvements and open-ended responses.

Participant Spillover

For the GPY1 Prescriptive Program evaluation, a battery of questions was asked to identify spillover candidates who may then be asked to participate in a follow-up interview by an engineer to quantify spillover savings. Below are paraphrased versions of the spillover questions that were asked:

1. Since your participation in the Prescriptive Program, did you implement any ADDITIONAL energy efficiency measures at this facility or at your other facilities within <Peoples Gas or North Shore Gas> service territory that did NOT receive incentives through any utility or government program?
2. On a scale of 0-10, where 0 means “no influence” and 10 means “greatly influenced,” how much did your experience with the Prescriptive Program influence your decision to install high efficiency equipment on your own?
3. Why do you give the Prescriptive Program this influence rating?

If the response to question 2 was given a score of 7 or higher, we judged the respondent to be a spillover candidate. Unfortunately, due to the low response rate that the Prescriptive participant survey received, Navigant was unable to identify any participants who experienced spillover as a result of their participation in the program. In GPY2, we will continue to attempt to identify participants who experienced spillover, and will ask the following additional question during the CATI survey:

“Thank you for sharing this information with us. We may have follow-up questions about the equipment you installed outside of the program. Would you be willing to speak briefly with a member of our team?”

All respondents who answer “yes” indicating that they would be willing to speak with a member of our team would be contacted by an engineer. The follow-up engineering interview attempts to confirm that spillover had occurred and estimate the energy savings.

NTG Scoring

The net-to-gross scoring approach is summarized in Table 5-8.

Table 5-8. Net-to-Gross Scoring Algorithm for the GPY1 Prescriptive Program

Scoring Element	Calculation
Timing and Selection score. The maximum score (scale of 0 to 10 where 0 equals not at all influential and 10 equals very influential) among the self-reported influence level the program had for: A. Availability of the program incentive B. Recommendation from utility program staff person C. Information from utility or program marketing materials D. Endorsement or recommendation by utility account manager E. Other factors (recorded verbatim) F. Information provided through technical assistance received from utility or Franklin field staff G. Vendor Score (when triggered) H. Account Manager Score (when triggered)	Basic Rigor: Maximum of A, B, C, D, E and F Standard Rigor: Maximum of A, B, C, D, E, F, G, and H
Program Influence score. “If you were given a TOTAL of 100 points that reflect the importance in your decision to implement the <ENDUSE>, and you had to divide those 100 points between: 1) the program and 2) other factors, how many points would you give to the importance of the PROGRAM?”	Points awarded to the program (divided by 10). Divide by 2 if the customer learned about the program AFTER deciding to implement the measure that was installed
No-Program score. “Using a likelihood scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely,” if the utility program had not been available, what is the likelihood that you would have installed exactly the same equipment?” The NTG algorithm computes the Likelihood Score as 10 minus the respondent’s answer (e.g., the likelihood score will be 0 if extremely likely to install exactly the same equipment if the program had not been available). Adjustments to “Likelihood score” are made for timing: “Without the program, when do you think you would have installed this equipment?” Free-ridership diminishes as the timing of the installation without the program moves further into the future.	Interpolate between Likelihood Score and 10 to obtain the No-Program score, where If “At the same time” or within 6 months then the No Program score equals the Likelihood Score, and if 48 months later then the No Program Score equals 10 (no free-ridership)
Project-level Free-ridership (ranges from 0.00 to 1.00)	1 – Sum of scores (Timing & Selection, Program Influence, No-Program)/30
“Our records show that <COMPANY> also received an incentive from <UTILITY> for a <different end use> project at <same ADDRESS>. Was the decision making process for the <different end use> project the same as for the <ENDUSE> project we have been talking about?”	If participant responds “same decision,” assign free-ridership score to other end-uses of the same project
“Our records show that <COMPANY> also received an incentive from <UTILITY> for <number> other <ENDUSE> project(s). Was it a single decision to complete all of those <ENDUSE> projects for which you received an incentive from <UTILITY> or did each project go through its own decision process?”	If participant responds “single decision,” assign free-ridership score to same end-use of the additional projects (projects with separate project ID’s)
GPY1 Project level Net-to-Gross Ratio (free-ridership only)	1 – Project level Free-ridership

The NTGR estimation considered trade ally research findings for the telephone survey respondents who indicated a strong influence of the vendor or program participating trade ally in the decision to implement the project.

The NTGR and relative precision at a 90% confidence level for the overall program and the net program savings estimates are provided in Table 5-9 and Table 5-10.

Table 5-9. GPY1 Program Gross and Net Energy Savings Estimates

Program	Ex-ante Gross Energy Savings (Therms)	Verified Gross Energy Savings (Therms)	Verified Gross Realization Rate ²³	Verified Net Energy Savings (Therms)	Research Findings Net-to-Gross Ratio
Peoples Gas	529,545	528,485	1.00	227,249	0.43
North Shore Gas	99,134	98,936	1.00	42,542	0.43

Table 5-10. Research Findings NTG Ratio and Relative Precision at 90% Confidence Level

Project Population (N=137)	NTG Interviews (n=37)	NTG Sample (n=40)	Relative Precision (± %)	Low	NTGR (Mean)	High
137	37	37	9%	0.39	0.43	0.47

Table 5-11 provides average NTGR estimated for respondents based on the primary measure implemented.

Table 5-11. NTG Ratio by Implemented Measure from Respondents

Primary Measure Description	Respondent Count	Average Verified Net-to-Gross Ratio
Boiler Cutout/Reset Controls	1	0.55
Boiler tune-up	14	0.47
Boilers > 300 MBtu > 90% TE	6	0.37
Condensing Unit Heater	1	0.40
Energy Star Convection Oven	1	0.57
Furnace ≤225 MBH ≥92% AFUE	2	0.38
Furnace ≤225 MBH ≥95% AFUE	5	0.52
Programmable Thermostat	3	0.56
Steam trap repair/replacement	4	0.50

²³ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

5.3 TRM Recommendations

- The bulk of GPY1 Prescriptive Program savings came from projects that installed boiler tune-up measures. We also found that majority of respondents to the GPY1 CATI survey implemented boiler tune-ups within the last three years, and many indicated they had maintenance contract for the heating system equipment. In GPY2, the program will need to do adequate screening of applications so that only those who had not implemented boiler tune-ups nor had no maintenance contracts within the last three years qualify to receive incentives, as required in the Illinois TRM for realizing savings from boiler tune-ups applications. Given the prevalence of previous boiler tune-ups and maintenance contracts that may not be as thorough as the program rebated services, the Illinois TRM Technical Advisory Committee may want to consider refining these eligibility criteria.
- The IC should update or minimize rounding errors in the tracking system when applying the default savings estimates found in the *Master Measure Document*, and were verified by Navigant. We recommend that the IC includes a field in the tracking data that includes the measure unit savings, as well as the unit of measurement.

Table 5-12 shows what we found in the tracking database, compared to what was estimated in the Peoples Gas and North Shore Gas *Master Measure Document*, and were verified by the evaluation team.

Table 5-12. GPY1 C&I Prescriptive Participating Measures - Verified Per Unit Savings

Measure	Unit	Ex-ante Gross Therms/Unit	Verified Gross Therms/Unit	Verified Gross Realization Rate
Boiler Cutout/Reset Controls	MBH	1.170	1.163	0.994
Boiler tune-up	MBH	0.234	0.233	0.996
Boilers < 300 MBtu > 90% AFUE	MBH	1.957	1.965	1.004
Boilers > 300 MBtu > 90% TE	MBH	1.617	1.615	0.999
Boilers > 300 MBtu >85% TE	MBH	0.851	0.855	1.005
Condensing Unit Heater	MBH	2.255	2.260	1.002
Energy Star Convection Oven	Oven	306.0	306.0	1.000
Energy Star Fryer	Fryer	508.0	508.0	1.000
Energy Star Steamer	Steamer	1,683.0	1,683.0	1.000
Furnace ≤225 MBH ≥92% AFUE	Furnace	189.6	189.6	1.000
Furnace ≤225 MBH ≥95% AFUE	Furnace	229.5	229.5	1.000
Infrared Charbroiler	Broiler	661.0	661.0	1.000
Infrared Salamander Broiler	Broiler	239.0	239.0	1.000
Infrared Upright Broiler	Broiler	1,089.0	1,089.0	1.000
Pasta Cooker	Cooker	1,380.0	1,380.0	1.000
Pre Rinse Sprayers	Sprayer	117.9	117.9	1.000
Programmable Thermostat	Thermostat	178.0	178.0	1.000
Steam Trap Repair/Replacement	Steam Trap	330.5	330.5	1.000
Water Heater .67 EF	Water Heater	148.0	148.0	1.000

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking database (8/27/2012 data)
Integrus Master Measure Document 091012.xlsx

5.4 Sampling Details

Verified gross program savings impacts were determined from reviewing program default savings, and analysis of sample of participant responses to the telephone survey. Shown in Table 5-13 is the profile of the gross impact of the sample participant survey for the Prescriptive Program in comparison with the Prescriptive Program population.

Table 5-13. Profile of GPY1 Gross Impact Sample

Population Summary			Sample			
Utility	Number of Projects (N)	Ex-ante Gross Therms	n	Ex-ante Therms	Sampled Project % of Population	Sampled Therms % of Population
Peoples Gas	106	529,545	29	172,610	27%	33%
North Shore Gas	31	99,134	8	12,324	26%	12%
Combined	137	628,679	37	184,933	27%	29%

Source: Navigant analysis of Peoples Gas and North Shore Gas tracking system 8-27-2012 extract; analysis of CATI respondents

We employed the ratio estimation of the population mean technique²⁴ (approximate variance of the ratio estimate) to analyze the sample reported savings and the verified gross savings, and analyze the variance in the ratio estimation of the gross realization rate to determine the confidence interval and precision. The standard error was used to estimate the error bound around the estimate of verified gross therms. The results are summarized in Table 5-14.

Table 5-14. Gross Therms Realization Rate and Relative Precision at 90% Confidence Level

Sampling Strata	Relative Precision at 90% Level of Confidence (± %)	Low	Mean	High	Standard Error
Overall Gross Savings RR	0.09%	0.997	1.00 ²⁵	0.999	0.001

Navigant analysis

The mean verified gross realization rate for the sample was 1.00 at 0.09% relative precision at a 90% confidence level. Below are the statistical formulas used to achieve the verified gross realization rate and precision.

$$V(\hat{R}) = \frac{1-f}{n\bar{X}^2} \left[\frac{\sum_{i=1}^N (y_i - Rx_i)^2}{N-1} \right]$$

$$V(\hat{R}) = \frac{1-f}{n\bar{X}^2} (S_y^2 + R^2 S_x^2 - 2R\rho S_y S_x)$$

Where:

²⁴ Source: Wiley Series in Probability and Mathematical Statistics – Sampling Techniques (2 Ed., 1962, pages 158-159)

²⁵ It should be noted that the verified realization rate was calculated to be 0.998. For reporting purposes, Navigant has rounded the calculated realization rate to 2 decimal places. All gross savings values were calculated using a realization rate of 0.998.

$V(\hat{R})$ = variance in the realization rate estimation

$f = n/N$ is the sampling fraction

n = sample size

N = population size

R = Realization Rate (ratio estimation)

\bar{X}^2 = population ex-ante mean

S_y^2 = the variance of the sample verified gross savings

S_x^2 = the variance of the sample ex-ante gross savings

$\rho S_y S_x$ = covariance between the sample ex-ante gross savings and the verified gross savings

5.5 VDDTSR Memo-Final version

To: Pat Michalkiewicz, Peoples Gas & North Shore Gas

CC: Jennifer Hinman, David Brightwell, ICC Staff
Sue Nathan, Applied Energy Group
Kevin Grabner, Randy Gunn, Rob Neumann, Navigant, Inc.

From: Charles Ampong and Josh Arnold, Navigant, Inc.

Date: May 24, 2012

Re: Peoples Gas & North Shore Gas GPY1 Commercial & Industrial Prescriptive Rebate Program — Verification and Due Diligence and Program Tracking System Review

Introduction

This document provides the results from Navigant’s verification and due diligence review of the program tracking, quality assurance and savings verification procedures used in the Peoples Gas & North Shore Gas Commercial & Industrial Prescriptive Rebate Program (C&I Prescriptive Program) during the program’s first year (GPY1). The main components of this task included interviews with implementation staff, documentation review and comparing the C&I Prescriptive Program to national best practices.

Overview of Findings

Overall, the quality assurance and verification procedures outlined in the program’s Operations Manual²⁶ provide a detailed quality control framework that meets many aspects of national best practices. Specifically, program guidelines for measure eligibility, onsite inspections for qualifying project installations and internal program quality assurance and quality control checks generally meet or exceed expectations.

The C&I Prescriptive Program’s tracking system is capable of accurately tracking estimated net project savings for high efficiency space heating, control technologies, water heating, and food service measures. The C&I Prescriptive Program’s internal documentation, including the Operations Manual and master spreadsheet list of measures, contain engineering assumptions and methodology used to estimate default savings for the twenty-four (24) measures eligible under the program. The C&I Prescriptive Program’s application form, available on the

²⁶ Peoples Gas & North Shore Gas SB 1918 Energy Efficiency Programs Operation Manual (V 4.0 DRAFT, Updated: 1-6-2012, and V6 updated 4/2/2012)

program's website, provides clear instructions for program applicants to submit qualifying measures and supporting documentation in order to qualify for an incentive through the C&I Prescriptive Program.

Introduction of the Program

The C&I Prescriptive Program began program operations in June 2011. As with many new programs, the C&I Prescriptive Program initially encountered some challenges recruiting participants. Since then, participation in the program has been trending upward with increased market penetration and support from Peoples Gas and North Shore Gas account managers. The C&I Prescriptive Program maintains an active trade ally network to recruit participants. To help promote trade ally participation, the program has sponsored training events for trade allies designed to educate them about the technical and financial resources available to their customers.

Purpose of the Verification and Due Diligence Review

The primary purpose of the verification and due diligence task was to determine:

- Whether appropriate eligibility criteria have been properly adhered to and applications are backed with supporting documentation;
- Whether savings were calculated correctly and project information entered in an accurate and timely manner in the program tracking system; and
- If any QA/QC activities are biased (i.e., incorrect sampling that may inadvertently skew results, purposeful sampling that is not defensible.)
- Whether the data needed for program evaluation are being thoroughly captured by the program tracking system.

Data Collection

Navigant collected data for this verification and due diligence task through interviews with program implementation staff and reviewing program documentation covering the time period from January through March 2012. Navigant's findings are based on reviewing data collected through the following activities and materials reviewed from the C&I Prescriptive Program:

- Interview with the program implementer
- Operations Manual
- Program application and incentive worksheets
- File review of projects selected by Navigant
- Program tracking system review
- Review of marketing and outreach efforts
- Comparing program materials to national best practices

Interview with Program Implementation Contractor

Navigant conducted a telephone interview with the C&I Prescriptive Program manager to review the program's accomplishments and challenges to date. The telephone interview included prepared question topics such as program administration, program outreach and marketing, program delivery mechanisms, customer satisfaction, and implementation challenges. At the conclusion of each interview, Navigant provided extra time to discuss any questions or raise additional topics that were not already covered in the telephone interview.

Program Documentation Review

Navigant requested program documentation to review for this task. The program implementer provided program documentation to conduct the verification and due diligence review. This documentation included the program's Operations Manual, Integrys 2011 Compliance Filing²⁷, an extract from the program's tracking database, customer applications, incentive processing worksheets and marketing materials. Navigant reviewed the program's quarterly program delivery report submitted to Peoples Gas and North Shore Gas. The program's Operations Manual provided a detailed quality control and quality assurance framework that clearly outlines the program guidelines for applicants and measure eligibility. The Operations Manual includes a framework for program staff to verify measure eligibility, review customer applications, conduct onsite inspections when necessary and process customer incentives. The program's Quarterly Delivery Report included highlights of potential and realized energy savings and cost information related to the program's performance to date.

Project File Engineering Desk Review

The evaluation team selected three paid C&I Prescriptive projects for engineering desk review. The projects selected were Peoples Gas projects 34323 and 37446 and North Shore Gas project 27480. Information was provided to Navigant from the program implementer. Navigant reviewed information included in the project files and compared entries in the project files to corresponding entries in the program tracking database for accuracy and completeness.

Navigant's review of the project files found that the documents submitted were complete and did not appear to be missing any critical information. The project files included completed applications, itemized invoices, and specifications for installed equipment, incentive request worksheets, and copies of paid checks. Two of the project files requested (Peoples Gas projects 34323 and 37446) received incentives of less than \$10,000 and therefore, were not required to have a post-installation inspection. The third project file (North Shore Gas project 27480) did receive a post-installation inspection. Navigant reviewed the post-installation inspection checklist for that project. The checklist showed the inspection date and inspector name, and that the installed measure is operational and matches the specification and quantities described in the application.

²⁷ North Shore Gas/Peoples Gas Compliance Filing Energy Efficiency Program Plan, June 1, 2011 – May 31, 2014 at the ICC, June 2011, Docket 10-0564 Attachment A.pdf

Program Tracking System Review

Navigant performed a review of the program tracking system. The program implementer provided a process guide for the Bensight Data Management system²⁸. The Bensight Guide details the process for creating an account, setting up a project file and recording project information. In addition, the Guide includes a process for conducting final data entry quality control checks to help ensure project information is accurately recorded and tracked in the system. Navigant obtained an extract from the program tracking system (Access database format extracted from 2/14/2012) to review information included in the tracking system and compare it with corresponding entries in project files.

Marketing and Outreach Review

Navigant reviewed marketing and outreach materials supplied by the implementation contractor including a program marketing plan, list of contracted trade allies, trade ally outreach and orientation meeting documents. Navigant found that the program's marketing and outreach materials were generally consistent with the program's marketing plan and goals.

Review of Program Operating Procedures

Navigant examined the operating procedures outlined in the program Operations Manual. We outline each step in the section below. The program Operations Manual identifies the following key steps leading to final project approval and incentive payment:

- Application Submittal and Pre-Review
- Incentive Approval
- Inspection and Verification

Application Submittal and Review

After a customer installs a project that includes pre-approved equipment on the program's list, the customer (or trade ally on behalf of the customer) submits an application with supporting documentation to the program. Program technical staff reviews a customer's application to confirm that the customer and the installed equipment are eligible for the program. Program staff also verify that the application and accompanying information is complete by verifying the customer's contact information (to determine whether the customer is serviced by Peoples Gas or North Shore Gas), technical specifications for installed equipment, invoices or proof of purchase receipts for the installed equipment and compliance with other program rules. If the application is missing information, the program staff asks the customer to submit additional information. If the application is complete, the program staff inputs the project into the program tracking system.

²⁸ EE and EA Process in Bensight.pdf (Bensight Guide)

Incentive Approval

If the customer's application is approved for an incentive, the program staff notifies the customer of the approved incentive payment. Depending on the amount of the incentive check, one or more program managers must approve the project file prior to issuance. Upon sending the incentive check to the customer, program staff marks the project as "Paid" and uploads the scanned check(s) and documentation to the program tracking system.

Inspection and Verification

The purpose of post-installation inspections are to ensure that the program's key performance indicators are met through performing the quality assurance and quality control procedures documented in the program's Operation Manual. During a post-installation inspection, program staff inspects the project site and record the condition of the installed equipment and any additional information. Program staff performs post-installation inspections for all C&I Prescriptive projects with incentives over \$10,000. For projects with incentives less than \$10,000, program staff conducts randomly selected post-installation inspections of not less than 2.5% and up to a maximum of 5% of approved projects. The C&I Prescriptive Program uses standardized inspection forms or a checklist that records the inspection date and inspector name, whether measures are installed as described in the application, whether the model matches required specifications, functionality, and quantity consistency. The C&I Prescriptive Program does not require pre-inspection approval.

Verification and Due Diligence Findings

Navigant reached the following findings for this task based on reviewing program documentation and interviewing program staff. Our findings are followed by a comparison of the C&I Prescriptive Program's activities to the *Best Practices Self-Benchmarking Tool*²⁹ from the *National Energy Efficiency Best Practices Study*, and a recommendation section.

- Navigant reviewed the application procedures for the C&I Prescriptive Program and determined that they provide sufficient detail for customers to gain a clear understanding of the expected documentation requirements and obligations when submitting a project for an incentive. The program application form provides sufficient information for a customer to submit a project to the program. The application form includes instructions for use, fields for project information and the terms and conditions for incentive payment.
- As of 2/14/2012, program savings were primarily from the installation of high efficiency boilers, boiler controls and boiler tune-up measures. Approximately 60 projects have been completed with realized savings (54 projects for Peoples Gas and six projects for North Shore Gas).

²⁹ Best Practices Self-Benchmarking Tool developed for the Energy Efficiency Best Practices Project:
<http://www.eebestpractices.com/benchmarking.asp>

- Generally, the program tracking database (2/14/2012 extract) captures relevant data required to track the program's actions for reporting and evaluation activities. Navigant found some aspects of the tracking system difficult to work with. For instance, water measure installations are tracked by the unit quantity, while boiler measures are tracked by MBTU capacity as the quantity.
- Navigant noted the possibility of some data entry errors in the tracking system column field name "eo2__Project_Type__c". This column included three paid projects (Projects 37001, 44502, and 27742) designated as "Residential Prescriptive". Navigant reviewed these projects and determined that they installed boiler tune up and furnace measures that were C&I Prescriptive projects. The column includes three additional projects that appear to be Residential Prescriptive projects (Projects 24721, 24586, and 24596) but were referred to as "C&I Prescriptive" in the column.
- Navigant noted that some project files included valuable post-installation inspection information not transferred to the project tracking system. For example, Project 27480 included post-installation inspection findings and condition of installed equipment, inspection completion date and technician name, and the make and model of installed HVAC measures. This information was not transferred to the tracking system. Navigant noted a project in the tracking system (Project 29408 with a \$32,000 paid incentive) that program staff may need to review. The tracking system indicated no post-installation inspection was required for this project, which seems to be inconsistent with program guidelines.
- Program staff appears to be doing a good job collecting any missing information necessary to approve project incentive payments. This customer service follow up minimizes the likelihood of the program rejecting projects due to missing information.
- Program staff noted during the telephone interview that there is a possibility for market confusion due to similar programs recently or currently offered by other utilities. For example, one incident occurred (project 22312) where a customer sent an application to a wrong address (i.e. Chicagoland). The application was forwarded to the C&I Prescriptive Program.
- Program staff reports that the program is gaining traction in the marketplace. One example of a marketing strategy was a bonus incentive tied to attendance at the 2011 Efficiency Expo (E3) Conference, in which five customers participated. One customer (project 47055) received an additional \$5 bonus for each installed steam trap. Another customer (project 27480) installed high efficiency boilers (producing energy savings of 21,000 therms) and received an additional 15% incentive from attending the E3 conference. Navigant noted that project 27480 received an incentive of \$64,400—which exceeds the maximum \$50,000 incentive per prescriptive project.

Quality Control and Verification Best Practices

To conduct the best practices benchmarking assessment, the evaluation team compared the program implementer's practices (shown as a bullet list) with the *Best Practices Self-*

Benchmarking Tool³⁰ from the National Energy Efficiency Best Practices Study (numbered items in italic font).

Program Design and Structure

1. *Assure quality of product through independent testing procedures.*
 - The C&I Prescriptive Program verifies that each product on which incentives are paid meets the prescribed efficiency standards using third-party databases (i.e. ENERGY STAR, GAMA, and AHRI). Products that cannot be verified using a credible third-party database are considered on a case-by-case basis where efficiencies are verified by a qualified engineer.
2. *Use measure product specifications in program requirements and guidelines.*
 - The program's Operating Plan outlines the eligible measures and the qualifying efficiency standards. The incentive application forms contain specification sheets with equipment eligibility requirements for the boilers, furnaces, water heaters, appliances, sprayers and steam traps.
3. *Develop inspection and verification procedures during the program design phase.*
 - The program implementer developed appropriate quality assurance procedures for inspection and verification. These procedures are detailed based on the program implementer's experience in the C&I market.
4. *Implement a contractor screening/certification/training process.*
 - The C&I Prescriptive Program recruits trade allies, conducts orientation meetings and in-person visits to educate trade allies about the program.
5. *Use incremental costs to benchmark and limit payments, and set incentive strategy to maximize net not gross program impacts.*
 - Payments and C&I Prescriptive formulas are tied to measure incremental costs.
 - The incentive strategy for all measures considers the likely level of free-ridership and seeks to maximize net savings.

Data Reporting and Tracking

6. *Define and identify key information needed to track and report early in the program development process*
 - Program data requirements were defined early in the program development process and are tracked in the program tracking database.
7. *Design the program tracking system to support the requirements of evaluators as well as program staff.*
 - The tracking system allows real-time reporting of routine functions like monthly portfolio and program reports, energy savings and financial tracking. The data tracking system is well-designed and fulfills the needs of both the program staff and evaluators.

³⁰ See the Best Practices Self-Benchmarking Tool developed for the Energy Efficiency Best Practices Project: <http://www.eebestpractices.com/benchmarking.asp>

8. *Develop accurate algorithms and assumptions on which to base savings estimates.*
 - Savings algorithms use empirical data from recent evaluations and are based on acceptable deemed savings approaches. We recommend some changes to GPY1 default inputs, addressed in separate findings, and also recommend adopting the Illinois Statewide Technical Reference Manual when it becomes final for PY2.
9. *Verify accuracy of invoices to ensure the reporting system is recording actual product installations by target market.*
 - Customers are required, as part of the C&I Prescriptive Program terms and conditions, to submit copies of all invoices or other reasonable documentation of the costs associated with purchasing the incentivized equipment.
 - As part of the application review process, program staff compares invoices and purchase orders to the application information to verify measure installation. A sample of projects is selection for post-installation inspection.

Inspection Procedures

10. *Conduct independent on-site post-installation inspections.*
 - The C&I Prescriptive Program conducts post-installation inspections for all measures on projects with incentives over \$10,000, and not less than 2.5% and a maximum of 5% of projects with incentive under \$10,000.
 - The program implementer, rather than an independent third party, conducts the GPY1 post inspection and verification.
11. *Conduct inspections in a timely manner.*
 - Navigant's review of the program staff's post-installation inspections indicates that the inspections were completed promptly, but findings could be transferred to the program tracking system more quickly.
12. *Always inspect the first job submitted by a new vendor or Contractor*
 - Post-installation inspection procedures include that the program staff invite the contractor/trade ally to the post-installation inspection. However, it does not appear that this is a requirement of new trade allies or contractors.

Evaluation

13. *Assess customer satisfaction with the product through evaluation.*
 - Navigant, an independent third-party evaluation contractor, will include customer satisfaction questions as part of its process evaluation for this program. In addition, the program implementer conducts customer satisfaction surveys with a target of at least a 10% response rate and a goal of achieving an average overall rating of 4.5 or above on a 5.0 scale.

14. *Present actionable findings to program staff both in real time and at the end of study.*

- Navigant's evaluation reports will include actionable findings. Navigant will communicate any actionable items to program staff and the utility in real-time through informal communications or memoranda.

Recommendations

Navigant has the following recommendations for consideration by Peoples Gas and North Shore Gas and the program implementation contractor. These recommendations are based on our review of the program's documentation and interviews with program staff.

- Navigant recommends tracking measure quantities and savings consistently. For instance, water measure installations are tracked by the unit quantity, while boiler measures are tracked by MBTU capacity as the quantity. We recommend adding a physical unit count quantity field for measures with quantities scaled in MBTU, so that tracked data can differentiate between physical counts and total installed capacity.
- In addition to tracking the net project savings, Navigant recommends tracking gross project savings and the NTGR for each program default measure.
- Navigant recommends that the program staff consider inspecting the first completed project from a new contractor or trade ally. Additionally, Navigant recommends that program staff monitor performance of contractors and trade allies to promote quality installation and customer service. The program should put complaint resolution processes in place if an issue arises between a customer and a contractor or trade ally.
- Navigant recommends that program staff consider inspecting the first few completed projects of a measure in the program.
- Navigant recommends that program staff consider inspections of a measure if the measure has a small customer rebate amount but is a high impact measure that accounts for a large portion of program savings.
- Navigant recommends establishing internal guidelines for handling exceptions to published program rules affecting rebate amounts, and documenting internal decisions regarding individual cases, such the incentive payment for Project #27480.
- Navigant recommends that program staff consider including additional project information in the program files and tracking system. In addition to storing a scanned copy of the post-inspection form into the tracking system, we recommend recording key data in unique fields (date of inspection, technician, make and model of the baseline (or pre-existing) equipment (if available) and whether the inspection passed with or without changes or identified problems.
- In preparation for adopting TRM deemed values, Navigant recommends tracking key parameters used in selecting TRM values, including the type of boiler the program is rebating (e.g. hot water boiler, steam or condensing boiler), building/space type, and EFLH location/climate zones.

- Navigant recommends that program staff highlight the requirement that customers comply with post-installation inspections and responses to program evaluation surveys, interview requests and/or on-site measurement and verification activities as conditions of accepting a rebate payment from the program.
- Navigant recommends that the program staff review project file (project# 29408) to determine whether this project should receive a post-installation inspection. It appeared to require an inspection based on program operating guidelines, but was marked as inspection not required.
- Navigant recommends that program staff review the program tracking entries for Projects# 37001, 44502, and 27742, potentially incorrectly designated as “Residential Prescriptive” and Projects# 24721, 24586, and 24596, potentially incorrectly designated as C&I Prescriptive.

5.6 *Franklin Energy Services Memorandum in Response to VDDTSR (C&I Prescriptive Rebate excerpt)*

Date: July 18, 2012

To: Pat Michalkiewicz, Manager, Energy Efficiency and Major Accounts, Peoples gas and North Shore Gas

Cc: Ed Carroll, Jamie Peters, Tim Kaddatz, Ken Dentice – Franklin Energy
Susan Nathan, AEG

From: Jay Boettcher, Regional Director
Paul Isaac, Regional Director

Re: Navigant's verification and due diligence review of program tracking, quality assurance and savings verification procedures in GPY1 of the Peoples Gas and North Shore Gas C&I Portfolio

The following memo provides analysis, feedback, and strategies for improvement in response to four (4) program evaluation memos provided to the program by our evaluator, Navigant. As the Program Manager on record for the entire C&I portfolio, responses to all four memos are contained within.

C&I Prescriptive Rebate Program

Overall, the evaluation team found that program QA and verification procedures met with national best practices and met or exceeded the expectations of the evaluation team. A few issues were raised in the memo and are addressed below.

- **Recommendation:** Adding a physical unit count quantity field for measures with quantities scaled in MBTU.

Response: All measures that are incented by MBTU input are separately entered into the system as individual retrofits. If one customer submits an application for three boiler tune-ups, three separate retrofits are entered. Therefore, program management staff knows that each of the boiler tune-up measures represents one boiler that was serviced through the program. This is highlighted in project 74739 where one customer submitted an application for 5 Boiler Tune-Ups. Each Tune-Up is entered separately.
- **Recommendation:** Tracking net and gross savings in addition to the NTG ratio for each measure. **Response:** In the prescriptive program, all savings recorded (and submitted in the filing) are net. Program management will explore adding a field for gross savings and identifying in the program metrics the NTGR.

- **Recommendation:** Improved Trade Ally oversight and management.

Response: This recommendation has three parts: 1) post-inspection of the first project submitted by a TA; 2) monitoring TA performance; and 3) developing a complaint resolution process. These are all wise recommendations and program management will develop three separate processes to address each of these by September, 2012.
- **Recommendation:** Inspect the first few installations of any given measure and those that have a small rebate but high impact.

Response: This is a sound recommendation and a process will be developed to address this.
- **Recommendation:** Develop internal guidelines for handling exceptions to published program rules and document those decisions.

Response: This process already exists and is in place. See, for example, Project 27480. Granting exceptions is at the discretion of program management per operations manual.
- **Recommendation:** Valuable post-inspection data is not captured in the program tracking system.

Response: Program management will work with the IM team to identify additional fields not already in the system (as suggested by Navigant) that could be added to the system for tracking post-inspection findings, such as pass/fail status. Project 29408 is referenced in this section as requiring a post-inspection but not having one. However, this project did pass a post-inspection on April 6, 2012. It was noted elsewhere in the report that Franklin Energy should use an independent third-party to conduct the post inspection and verification process. Franklin Energy does, in fact, subcontract Post-Inspections for the C&I Prescriptive Program to DNV KEMA. This relationship began in October 2011 and will continue through the duration of the program. All C&I Prescriptive post-inspections are completed by this third-party vendor.
- **Recommendation:** Tracking data required by the adoption of the TRM.

Response: Program engineers will review the TRM for key parameters required by the TRM and will work with the IM team to determine the best way to track them within the system.
- **Recommendation:** Highlight the requirement that customers comply with the Terms and Conditions of the program (post-inspection, evaluation surveys, verification, etc.).

Response: This is contained within the application's terms and conditions numbers 8, 10, and 15.
- **Recommendation:** Review project 29408 for non-compliance with post-inspection requirement. Post-inspection findings are not transferred to the program tracking system in a timely manner.

Response: Project 29408 was assigned for post-inspection by our third-party post-inspection sub-contractor, DNV KEMA. The project was assigned on April 4th, the post-inspection was completed by a DNV KEMA staff member on April 6th, and the results were posted to the program tracking system on April 9th.

- **Recommendation:** Review projects for data entry errors in the tracking system column field name “Project Type.”

Response: The project type field is a new field in Bensight. Process documents will be updated to ensure that these fields are all populated and populated correctly. The six projects identified in the memo (37001, 44502, 24721, 24586, 24596, and 27742) have been reviewed and corrections were made where necessary.

5.7 Data Collection Instruments

5.7.1 Participant Survey

PEOPLES GAS AND NORTH SHORE GAS COMMERCIAL & INDUSTRIAL (C&I) PRESCRIPTIVE REBATE PROGRAM

PARTICIPANT SURVEY – COMMERCIAL & INDUSTRIAL (C&I) PRESCRIPTIVE REBATES

DRAFT August 3, 2012

Section	Topics	Questions
Screening		A0-A3c
Market Influencers	Who informed and influenced the incentive/rebate and incentive process and timing	MM1-MM3
Measure Loop	What were the steps in the incentive/installation process?	MS1-MS4
Free-ridership	Would business customers have installed the equipment without the program?	N00-N27
Spillover	About what percentage of customers have installed additional energy efficient equipment without an incentive?	SP1-SP5
Satisfaction	To what extent was the program satisfactory for the participant?	S0-S12
Marketing and Outreach	How well did the program marketing and outreach influence the participant?	MK0-MK2
Benefits and Barriers	What did the participant perceive to be the benefits and barriers to the program?	B1a-B3
Feedback and Recommendations	What feedback and recommendations do the participants offer?	R1 –R2
Firmographics	Firm-specific data for characterization	F1-F7

INTRODUCTION

[READ IF CONTACT=1]

Hello, this is _____ from _____ calling on behalf of <UTILITY (PEOPLES GAS OR NORTH SHORE GAS) (Peoples Gas or North Shore Gas)>. This is not a sales call. May I please speak with <PROGRAM CONTACT>?

Our records show that <COMPANY> purchased energy efficient <ENDUSE>, which was recently installed and received an incentive of <INCENTIVE AMOUNT> from <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)>. We are calling to do a follow-up study about <COMPANY>'s participation in this incentive program, which is called the Commercial & Industrial (C&I) Prescriptive Rebate Program. I was told you're the person most knowledgeable about this project. Is this correct? [IF NOT, ASK TO BE TRANSFERRED TO MOST KNOWLEDGABLE PERSON OR RECORD NAME & NUMBER.] This survey will take about 30 minutes. Is now a good time? [If no, schedule call-back]

[READ IF CONTACT=0]

Hello, this is _____ from _____ calling on behalf of <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)>. I would like to speak with the person most knowledgeable about recent changes in energy-related gas equipment for your firm at this location.

[IF NEEDED] Our records show that <COMPANY> purchased energy efficient <ENDUSE>, which was recently installed and received an incentive of <INCENTIVE AMOUNT> from <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)>. We are calling to do a follow-up study about your firm's participation in this incentive program, which is called the Commercial & Industrial (C&I) Prescriptive Rebate Program. I was told you're the person most knowledgeable about this project. Is that correct? [IF NOT, ASK TO BE TRANSFERRED TO MOST KNOWLEDGABLE PERSON OR RECORD NAME & NUMBER.]

This survey will take about 30 minutes. Is now a good time? [If no, schedule call-back]

SCREENING QUESTIONS

A0 Which of the following statements best characterizes your relation to <COMPANY>?

1. I am an employee of <COMPANY> (THIS CATEGORY SHOULD INCLUDE THE OWNER/PRESIDENT/PARTNER ETC. OF THE COMPANY.)
2. My company provides energy-related services to <COMPANY>
3. I am a contractor and was involved in the installation of energy efficient equipment for this project
00. (Other, specify) (PUT OWNER/PRESIDENT/PARTNER ETC. OF THE COMPANY IN 1)
88. (Don't know)
99. (Refused)

[READ if S1<1] This survey asks questions about the energy efficiency upgrades for which <COMPANY> received an incentive at <ADDRESS>. Please answer the questions from the perspective of <COMPANY>. For example, when I refer to "YOUR COMPANY", I am referring to <COMPANY>. If you are not familiar with certain aspects of the project, please just say so and I will skip to the next question.

A1. Just to confirm, between June 1, 2011 and May 31, 2012 did <COMPANY> participate in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> C&I Prescriptive Rebate Program at

<ADDRESS>? (IF NEEDED: This is a program where your business received an incentive for installing one or more energy-efficient products.)

- 1 (Yes, participated as described)
- 2 (Yes, participated but at another location)
- 3 (NO, did NOT participate in program)
- 00 (Other, specify)
- 88 (Don't know)
- 99 (Refused)

[SKIP A2 IF A1=1,2]

A2. Is it possible that someone else dealt with the energy-efficient product installation?

- 1 (Yes, someone else dealt with it)
- 2 (No)
- 00 (Other, specify)
- 88 (Don't know)
- 99 (Refused)

[IF A2=1, ask to be transferred to that person. If not available, thank and terminate. If available, go back to A1]

[IF A1=2,3,00,88,99: Thank and terminate. Record dispo as "Could not confirm participation".]

Before we begin, I want to emphasize that this survey will only be about the energy efficient <END USE> you installed through the C&I Prescriptive Rebate Program at <ADDRESS>.

A3. I'd like to confirm some information in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> database. Our records show that you implemented the following <ENDUSE> measures through the C&I Prescriptive Rebate Program. Is this correct?

[ASK A3a IF MEASD1 <> BLANK]

A3a <MEASD1>

- 1 (Yes)
- 3 (No, did not install)
- 88 (Don't know)
- 99 (Refused)

[ASK A3b IF MEASD2 <> BLANK]

A3b <MEASD2>

- 1 (Yes)
- 3 (No, did not install)
- 88 (Don't know)
- 99 (Refused)

[ASK A3c IF MEASD3 <> BLANK]

A3c <MEASD3>

- 1 (Yes)
- 3 (No, did not install)
- 88 (Don't know)
- 99 (Refused)

IF A3A=3,8,9 AND A3B=3,8,9 AND A3C=3,8,9: Thank and Terminate, Record Dispo as "Could Not Confirm Measures"

IF QA3A=1 OR 2 THEN MEAS1=1, IF QA3B=1 OR 2 THEN MEAS2=1, IF QA3C=1 OR 2 THEN MEAS3=1

MEASURE MODULE

- MM1 Who was the most influential in identifying and recommending that you install the <ENDUSE> project you completed through the C&I Prescriptive Rebate Program?
- 1. (me/respondent)
 - 2. (contractor)
 - 3. (engineer)
 - 4. (architect)
 - 5. (manufacturer)
 - 6. (distributor)
 - 7. (Owner)
 - 9. (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Representative/Program Staff)
 - 00. (Other, specify)
 - 88. (Don't know)
 - 99. (Refused)
- MM2 And who informed you about the availability of an incentive through the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> C&I Prescriptive Rebate Program?
- 1. (me/respondent "I contacted my utility as a matter of business to ask about their programs")
 - 2. (contractor)
 - 3. (engineer)
 - 4. (architect)
 - 5. (manufacturer)
 - 6. (distributor)
 - 7. (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Account Manager)
 - 8. (owner/developer)
 - 9. (project manager)
 - 11. (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Representative/Program Staff)
 - 00. (Other, specify)
 - 88. (Don't know)
 - 99. (Refused)
- MM3 When did you implement this project (IF NECESSARY, PROBE FOR BEST GUESS)
- a Month [Precodes for Jan through Dec.]

b Year [Precodes for 2011 and 2012]

Measure Loop

[Loop 1: ASK IF MEAS1=1. Loop 2: ASK IF MEAS2=1. Loop 3: ASK IF MEAS3=1.]

[For Loop 2, replace "1" at the end of read-ins with "2"; for Loop 3, replace "1" with "3".]

The following questions are about the <MEASD1> installed through the C&I Prescriptive Rebate Program.

[IF MEASD1= BOILER TUNE-UP OR INDUSTRIAL BURNER TUNE-UP, ASK NL4 AND NL5]

NL4 Prior to receiving this tune-up on your heating system through this program, when did you last tune up your heating equipment?

1. Within the past three years
2. More than three years ago
3. Never had a tune-up
00. Not applicable
88. Don't know
99. Refused

NL5 Prior to receiving the tune-up through this program, did <COMPANY> have a maintenance contract for the heating system equipment?

1. Yes
2. No
88. Don't know
99. Refused

[IF MEASD1= BOILER TUNE-UP OR INDUSTRIAL BURNER TUNE-UP, SKIP TO NEXT MEASURE]

REMOVED EQUIPMENT

MS1 Did the <MEASD1> you installed through the C&I Prescriptive Rebate Program replace old or outdated equipment at this facility, or was it an addition of new equipment?

- 1 (Addition of new equipment - did not replace anything)
- 2 (Replacement of old or outdated equipment)
- 00 (Other, specify)
- 88 (Don't know)
- 99 (Refused)

[SKIP MS2 MS3 AND MS4 IF NL1=1,88,99]

MS2. Approximately how old was the existing equipment?

- ___ Estimated Age
- 88 (Don't know)

99 (Refused)

IF RESPONDENT HAS TROUBLE ESTIMATING AGE OF EQUIPMENT, ASK:

MS2a. Approximately in what year was the existing equipment purchased?

___ Estimated Year of Purchase

88 (Don't know)

99 (Refused)

MS3. How much longer do you think it would have lasted?

___ Estimated Remaining Useful Life

88 (Don't know)

99 (Refused)

MS4. Which of the following statements best describes the performance and operating condition of the equipment you replaced through the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program?

1 Existing equipment was fully functional and without significant problems

2 Existing equipment was fully functional with some minor problems

3 Existing equipment was fully functioning, but with significant problems

4 Existing equipment had failed or did not function.

5 Not applicable ancillary equipment (controls, etc.)

00 Other (RECORD VERBATIM)

88 (Don't know)

99 (Refused)

[IF MEASD1=PROGRAMMABLE THERMOSTAT, ASK NL11 AND NL12]

NL11 After installing the <MEASD1> device, have you or a contractor programmed the temperature settings?

1 (Yes)

2 (No)

88 (Don't know)

99 (Refused)

[IF NL11=1, ASK NL12]

NL12 Has the <MEASD1> been programmed to maintain a different temperature during unoccupied periods than occupied periods?

1 (Yes)

2 (No)

88 (Don't know)

99 (Refused)

[IF MEASD1=GUEST ROOM ENERGY MANAGEMENT OR MEASD1=PROGRAMMABLE THERMOSTAT SKIP TO NEXT MEASURE]

[End of Measure Loop; GO TO NEXT MEASURE]

[ASK NET-TO-GROSS MODULE, THEN RETURN]

[ASK SPILLOVER MODULE, THEN RETURN]

NET-TO-GROSS MODULE

Variables for the net-to-gross module:

<NTG> (B=Basic rigor level, S= Standard rigor level. All questions here are asked if the standard rigor level is designated. Basic rigor level is designated through skip patterns)

<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)>

<PROGRAM> (Name of energy efficiency program)

<ENDUSE> (Type of measure installed; from program tracking dataset)

<VEND1> (Contractor who installed new equipment, from program tracking dataset)

<TECH_ASSIST> (If participant conducted Feasibility Study, Audit, or received Technical Assistance through the program; from program tracking database)

<OTHERPTS> (Variable to be calculated based on responses. Equals 1- minus response to N3p.)

<FINCRIT1> (Variable to be calculated based on responses. Equals 1 if payback period WITHOUT incentive is shorter than company requirement. See instructions below.)

<FINCRIT2> (Variable to be calculated based on responses. Equals 1 if payback period WITH incentive is shorter than company requirement. See instructions below.)

<MSAME> (Equals 1 if same customer had more than one project of the same end-use type; from program tracking database)

<NSAME> (Number of additional projects of the same end-use type implemented by the same customer; from program tracking database)

<FSAME> (Equals 1 if same customer also had a measure of a different end-use type at the same facility; from program tracking database)

<FDESC> (Type of end-use of a different measure type at the same facility; from program tracking database)

<ACCT_REP> (Name of utility account manager, from program tracking database or program files if present)

<BONUS> (Equals 1 if any Prescriptive lighting measure in the overall project received an incentive bonus from the June 1, 2011 to March 31, 2012 offer)

I'd now like to ask a few questions about the <ENDUSE> you installed through the program.

N00 In deciding to do a project of this type, there are usually a number of reasons that it may be undertaken. In your own words, can you tell me the reasons that you decided to implement this project? Were there any other reasons?

DO NOT READ

- 1 To replace old or outdated equipment
- 2 As part of a planned remodeling, build-out, or expansion
- 3 To gain more control over how the equipment was used
- 4 The maintenance downtime and associated expenses for the old equipment were too high
- 5 Had process problems and were seeking a solution

- 6 To improve equipment performance
- 7 To improve the product quality
- 8 To comply with codes set by regulatory agencies
- 9 To comply with company policies regarding regular/normal maintenance/replacement policy
- 10 To get a rebate from the program
- 11 To protect the environment
- 12 To reduce energy costs
- 13 To reduce energy use/power outages
- 14 To update to the latest technology
- 00 Other (RECORD VERBATIM)
- 88 (Don't know)
- 99 (Refused)

N1 Does your company have an annual capital budget?

- 1 Yes
- 2 No (Skip to N1b)
- 88 (Don't know) (Skip to N1b)
- 99 (Refused) (Skip to N1b)

N1a Was the measure already part of that capital budget before you were aware of the Commercial & Industrial (C&I) Prescriptive Rebate Program? (NOTE TO INTERVIEWER: "this measure" refers to the specific energy efficient equipment installed through the program.)

- 1 (Before)
- 2 (After)
- 88 (Don't know)
- 99 (Refused)

N1b Did you learn of the Commercial & Industrial (C&I) Prescriptive Rebate Program before or after you began to THINK about the implementation of this measure?

- 1 (Before) (Skip to N3)
- 2 (After)
- 88 (Don't know)
- 99 (Refused)

[ASK N1b IF N1a or N1b=2, 8, 9]

N2 Did you learn about the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program BEFORE or AFTER you DECIDED to implement the measure that was installed? (NOTE TO INTERVIEWER: "the measure" refers to the specific energy efficient equipment installed through the program.)

- 1 (Before)
- 2 (After)
- 88 (Don't know)
- 99 (Refused)

N3 Next, I'm going to ask you to rate the importance of the program as well as other factors that might have influenced your decision to implement this measure. Think of the degree of

importance as being shown on a scale with equally spaced units from 0 to 10, where 0 means not at all important and 10 means extremely important. Now using this scale please rate the importance of each of the following in your decision to implement the measure at this time.
[FOR N3a-n, RECORD 0 to 10; 96=Not Applicable; 88=Don't Know; 99=Refused]

(If needed: How important in your DECISION to implement the project was...)

[SKIP N3a IF NTG=B]

N3a. The age or condition of the old equipment

N3b. Availability of the PROGRAM incentive

[ASK IF N3b=8, 9, 10]

N3bb. What were the reasons that you gave it this rating?[OPEN END; 88=Don't know; 99=Refused]

[SKIP TO N3f IF NTG=B]

[ASK IF <TECH_ASSIST>=1, ELSE SKIP TO N3d]

N3c. Information provided through the technical assistance you received from <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> or Franklin Energy field staff

[SKIP N3cc IF NTG=B]

[ASK IF N3c=8, 9, 10]

N3cc. What were the reasons that you gave it this rating?[OPEN END; 88=Don't know; 99=Refused]

[ASK N3d IF V1=1]

N3d. Recommendation from an equipment vendor or contractor that helped you with the choice of the equipment

N3e. Previous experience with this type of equipment

N3f. Recommendation from a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program staff person

[SKIP N3ff IF NTG=B]

[ASK N3ff IF N3f=8, 9, 10]

N3ff. Why do you give it this rating?

N3h. Information from C&I Prescriptive Rebate Program or <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> marketing materials

[SKIP N3hh IF NTG=B]

[ASK IF N3h=8, 9, 10]

N3hh. Why do you give it this rating?

[SKIP TO N3k IF NTG=B]

[ASK N3i IF V3=1]

N3i. A recommendation from a design or consulting engineer

N3j. Standard practice in your business/industry

[SKIP N3k IF V4>1]

N3k. Endorsement or recommendation by a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> account manager



[SKIP N3kk IF NTG=B]

[ASK IF N3k=8, 9, 10]

N3kk. What were the reasons that you gave that rating?

[SKIP TO N3n IF NTG=B]

N3l. Corporate policy or guidelines

N3m. Payback on the investment

N3n. Were there any other factors we haven't discussed that were influential in your decision to install this MEASURE?

00 Other [Record verbatim]

96 (Nothing else influential)

88 (Don't Know)

99 (Refused)

[ASK N3nn IF N3n=00]

N3nn. Using the same zero to 10 scale, how would you rate the influence of this factor? [RECORD 0 to 10; 88=Don't Know; 99=Refused]

Thinking about this differently, I would like you to compare the importance of the PROGRAM with the importance of other factors in implementing the <ENDUSE> project.

[SKIP TO N3p IF NTG=B]

[READ IF (N3A, N3D, N3E, N3I, N3J, N3L, N3M, OR N3N)=8,9,10; ELSE SKIP TO N3p]

You just told me that the following other factors were important:

[READ IN ONLY ITEMS WHERE THEY GAVE A RATING OF 8 or higher]

(N3A) Age or condition of old equipment,

(N3D) Equipment Vendor recommendation

(N3E) Previous experience with this measure

(N3I) Recommendation from a design or consulting engineer

(N3J) Standard practice in your business/industry

(N3L) Corporate policy or guidelines

(N3M) Payback on investment

(N3N) Other factor

N3p If you were given a TOTAL of 100 points that reflect the importance in your decision to implement the <ENDUSE>, and you had to divide those 100 points between: 1) the program and 2) other factors, how many points would you give to the importance of the PROGRAM?
Points given to program: [RECORD 0 to 100; 8888=Don't Know; 9999=Refused]

[CALCULATE VARIABLE "OTHERPTS" AS: 100 MINUS N3p RESPONSE; IF N3p=8888, 9999, SET OTHERPTS=BLANK]

N3o And how many points would you give to other factors? [RECORD 0 to 100; 8888=Don't Know; 9999=Refused] [The response should be <OTHERPTS> because both numbers should equal 100. If response is not <OTHERPTS> ask INC1]

INC1 The last question asked you to divide a TOTAL of 100 points between the program and other factors. You just noted that you would give <N3p RESPONSE> points to the program. Does that mean you would give <OTHERPTS> points to other factors?

- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

[IF INC1=2, go back to N3p]

CONSISTENCY CHECK ON PROGRAM IMPORTANCE SCORE

[ASK IF (N3p>69 AND ALL OF (N3b, N3c, N3f, N3h, AND N3k)=0,1,2,3), ELSE SKIP TO N4aa]

N4 You just gave <N3p RESPONSE> points to the importance of the program, I would interpret that to mean that the program was quite important to your decision to install this equipment. Earlier, when I asked about the importance of individual elements of the program I recorded some answers that would imply that they were not that important to you. Just to make sure I have recorded this properly, I have a couple questions to ask you.

N4a When asked about THE AVAILABILITY OF THE PROGRAM INCENTIVE, you gave a rating of ...<N3B RESPONSE> ... out of ten, indicating that the program incentive was not that important to you. Can you tell me the reasons that was not that important?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

[SKIP N4b IF NTG=B OR<TECH ASSIST>=0]

N4b When I asked you about THE INFORMATION PROVIDED THROUGH THE TECHNICAL ASSISTANCE, you gave a rating of ...<N3C RESPONSE> ... out of ten, indicating that the information provided was not that important to you. Can you tell me the reasons that provided was not that important?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

N4c When I asked you about THE RECOMMENDATION FROM A <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> PROGRAM STAFF PERSON, you gave a rating of ...<N3F RESPONSE> ... out of ten, indicating that the information provided was not that important to you. Can you tell me the reasons that provided was not that important?

00 [Record VERBATIM]
 88 (Don't know)
 99 (Refused)

N4d When asked about THE INFORMATION from the <PROGRAM> or <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> MARKETING MATERIALS, you gave a rating of ...<N3H RESPONSE> ... out of ten, indicating that this information from the program or utility marketing materials was not that important to you. Can you tell me the reasons that this information was not that important?

00 [Record VERBATIM]
 88 (Don't know)
 99 (Refused)

[SKIP N4e IF V4>1 or N3k=96,88,99]

N4e When asked about THE ENDORSEMENT or RECOMMENDATION by YOUR UTILITY ACCOUNT MANAGER , you gave a rating of <N3K RESPONSE> ... out of ten, indicating that this Account manager endorsement was not that important to you. Can you tell me the reasons that this endorsement was not that important?

00 [Record VERBATIM]
 88 (Don't know)
 99 (Refused)

[ASK IF N3p<31 AND ANY ONE OF (N3b, N3c, N3f, N3h, OR N3k=8,9,10) ELSE SKIP TO N5]

N4aa You just gave <N3p RESPONSE> points to the importance of the program. I would interpret that to mean that the program was not very important to your decision to install this equipment. Earlier, when I asked about the importance of individual elements of the program I recorded some answers that would imply that they were very important to you. Just to make sure I understand, would you explain the reasons that the program was not very important in your decision to install this equipment?

Now I would like you to think about the action you would have taken with regard to the installation of this equipment if the utility program had not been available.

N5 Using a likelihood scale from 0 to 10, where 0 is “Not at all likely” and 10 is “Extremely likely”, if the utility program had not been available, what is the likelihood that you would have installed exactly the same equipment? [RECORD 0 to 10; 88=Don't know; 99=Refused]

CONSISTENCY CHECKS

[ASK N5a-d IF N3b=8,9,10 AND N5=7,8,9,10]

N5a When you answered ...<N3B RESPONSE> ... for the question about the influence of the incentive, I would interpret that to mean that the incentive was quite important to your decision to install. Then, when you answered <N5 RESPONSE> for how likely you would be to install the same equipment without the incentive, it sounds like the incentive was not very important in your installation decision.

I want to check to see if I am misunderstanding your answers or if the questions may have been unclear. Will you explain the role the incentive played in your decision to install this efficient equipment?

00 [Record VERBATIM]

88 (Don't know)

99 (Refused)

N5b Would you like for me to change your score on the importance of the incentive that you gave a rating of <N3B RESPONSE> or change your rating on the likelihood you would install the same equipment without the incentive which you gave a rating of <N5 RESPONSE> and/or we can change both if you wish?

1 (Change importance of incentive rating)

2 (Change likelihood to install the same equipment rating)

3 (Change both)

4 (No, don't change)

88 (Don't know)

99 (Refused)

[ASK IF N5b=1,3]

N5c How important was... availability of the PROGRAM incentive? (IF NEEDED: in your DECISION to implement the project) [Scale of 0 to 10, where 0 means not at all important and 10 means extremely important; 88=Don't know, 99=Refused]

[ASK IF N5b=2,3]

N5d If the utility program had not been available, what is the likelihood that you would have installed exactly the same equipment? [Scale of 0 to 10, where 0 means "Not at all likely" and 10 means "Extremely likely"; 88=Don't know, 99=Refused]

[ASK IF N3>7]

N6 In an earlier question, you rated the importance of STANDARD PRACTICE in your industry very highly in your decision making. Could you please rate the importance of the PROGRAM, relative to this standard industry practice, in influencing your decision to install this measure. Would you say the program was much more important, somewhat more important, equally important, somewhat less important, or much less important than the standard practice or policy?

- 1 (Much more important)
- 2 (Somewhat more important)
- 3 (Equally important)
- 4 (Somewhat less important)
- 5 (Much less important)
- 88 (Don't know)
- 99 (Refused)

[ASK IF N5>0, ELSE SKIP TO N8]

N7 You indicated earlier that there was a <N5 RESPONSE> in 10 likelihood that you would have installed the same equipment if the program had not been available. Without the program, when do you think you would have installed this equipment? Would you say...

- 1 At the same time
- 2 Earlier
- 3 Later
- 4 (Never)
- 88 (Don't know)
- 99 (Refused)

[ASK N7a IF N7=3]

N7a. How much later would you have installed this equipment? Would you say...

- 1 Within 6 months?
- 2 6 months to 1 year later
- 3 1 - 2 years later
- 4 2 - 3 years later?
- 5 3 - 4 years later?
- 6 4 or more years later
- 88 Don't know
- 99 Refused

[ASK N7b IF N7a=6]

N7b. What were the reasons that you do you think it would have been 4 or more years later?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

PAYBACK BATTERY [ASK N8-N10e IF N3m=6,7,8,9,10]

I'd like to find out more about the payback criteria <COMPANY> uses for its investments.

N8 What financial calculations does <COMPANY> make before proceeding with installation of a MEASURE like this one?

00 [Record VERBATIM]

88 (Don't know)

99 (Refused)

N9 What is the payback cut-off point <COMPANY> uses (in months) before deciding to proceed with an investment? Would you say...

1 0 to 6 months

2 7 months to 1 year

3 more than 1 year up to 2 years

4 more than 2 years up to 3 years

5 more than 3 years up to 5 years

6 Over 5 years

88 (Don't know)

99 (Refused)

N10 Does your company generally implement projects that meet the required financial cut-off point?

1 (Yes)

2 (No)

88 (Don't know)

99 (Refused)

[ASK N10aa IF N10=2]

N10aa What are the reasons that your company generally doesn't implement projects that meet the required financial cut-off point?

00 [Record VERBATIM]

88 (Don't know)

99 (Refused)

N10a Did the rebate play a big role in moving your project within the acceptable payback cutoff point?

1 (Yes)

2 (No)

88 (Don't know)

99 (Refused)

[CREATE VARIABLE FINCRIT1. SET FINCRIT1 = BLANK IF: N9=8,9 OR N10b=8888,9999. SET FINCRIT1 = 1 IF: (N9=1 AND N10b<7) OR (N9=2 AND N10b<13) OR (N9=3 AND N10b<25) OR (N9=4 AND N10b<37) OR (N9=5 AND N10b<61) OR (N9=6). ELSE, SET FINCRIT1 = 0.]

[ASK N10c IF FINCRIT1=1]

- N10c Even without the incentive, the <ENDUSE> project met <COMPANY>'s financial criteria. Would you have gone ahead with it even without the incentive?
- 1 (Yes)
 - 2 (No)
 - 3 (Maybe)
 - 88 (Don't know)
 - 99 (Refused)

[CREATE VARIABLE FINCRIT2. SET FINCRIT2 = BLANK IF: N9=8,9 OR N10a=8888,9999. SET FINCRIT2 = 1 IF: (N9=1 AND N10a<7) OR (N9=2 AND N10a<13) OR (N9=3 AND N10a<25) OR (N9=4 AND N10a<37) OR (N9=5 AND N10a<61) OR (N9=6). ELSE, SET FINCRIT2 = 0.

[ASK N10d IF FINCRIT2=1 AND FINCRIT1=0 AND N3b=0,1,2,3,4]

- N10d The incentive seemed to make the difference between meeting your financial criteria and not meeting them, but you are saying that the incentive didn't have much effect on your decision, why is that?
- 00 [Record VERBATIM]
 - 88 (Don't know)
 - 99 (Refused)

[ASK N10e IF FINCRIT2=0 AND N3b=8,9,10]

- N10e. The incentive didn't cause this <ENDUSE> project to meet <COMPANY>'s financial criteria, but you said that the incentive had an impact on the decision to install the <ENDUSE>. What was this impact?
- 00 [Record VERBATIM]
 - 88 (Don't know)
 - 99 (Refused)

CORPORATE POLICY BATTERY [ASK N11-N17 IF N3L=6,7,8,9,10]

- N11 Does your organization have a corporate environmental policy to reduce environmental emissions or energy use? Some examples would be to "buy green" or use sustainable approaches to business investments.
- 1 (Yes)
 - 2 (No)
 - 88 (Don't know)
 - 99 (Refused)

[ASK N12-N17 IF N11=1]

- N12 What specific corporate policy influenced your decision to adopt or install the <ENDUSE> through the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program?
- 00 [RECORD VERBATIM]
- 88 (Don't know)
- 99 (Refused)

- N13 Had that policy caused you to adopt energy efficient <ENDUSE> at this facility before participating in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program?
- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

- N14 Had that policy caused you to adopt energy efficient <ENDUSE> at other facilities before participating in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program?
- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

[ASK N15-N16 IF N13=1 OR N14=1]

- N15 Did you receive an incentive for a previous installation of <ENDUSE>?
- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

[ASK N16 IF N15=1]

- N16 To the best of your ability, please describe.... [Record VERBATIM; 88=Don't know; 99=Refused]
- the amount of incentive received
 - the approximate timing
 - the name of the program that provided the incentive

[ASK N17 IF N13=1 OR N14=1]

- N17 If I understand you correctly, you said that <COMPANY> 's corporate policy has caused you to install energy efficient <ENDUSE> previously at this and/or other facilities. I want to make sure I fully understand how this corporate policy influenced your decision versus the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program. Can you please clarify that?
- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

STANDARD PRACTICE BATTERY [ASK N18-N22 IF N3j=6,7,8,9,10]

- N18 Approximately, how long has use of energy efficient <ENDUSE> been standard practice in your industry?

- M [00 Record Number of Months; 88=Don't know, 99=Refused]
Y [00 Record Number of Years; 88=Don't know, 99=Refused]
- N19 Does <COMPANY> ever deviate from the standard practice?
1 (Yes)
2 (No)
88 (Don't know)
99 (Refused)
- [ASK IF N19=1]
- N19a Please describe the conditions under which <COMPANY> deviates from this standard practice.
00 [Record VERBATIM]
88 (Don't know)
99 (Refused)
- N20 How did this standard practice influence your decision to install the <ENDUSE> through the <PROGRAM>?
00 [Record VERBATIM]
88 (Don't know)
99 (Refused)
- N20a Could you please rate the importance of the <PROGRAM>, versus this standard industry practice in influencing your decision to install the <ENDUSE>. Would you say the <PROGRAM> was...
1 Much more important
2 Somewhat more important
3 Equally important
4 Somewhat less important
5 Much less important
88 (Don't know)
99 (Refused)
- N21 What industry group or trade organization do you look to establish standard practice for your industry?
00 [Record VERBATIM]
88 (Don't know)
99 (Refused)
- N22 How do you and other firms in your industry receive information on updates in standard practice?
00 [Record VERBATIM]
88 (Don't know)
99 (Refused)

DESIGN ASSISTANCE

- N23 Who provided the most assistance in the design or specification of the <ENDUSE> you installed through the <PROGRAM>? (If necessary, probe from the list below.)
- 1 (Designer)
 - 2 (Consultant)
 - 3 (Equipment distributor)
 - 4 (Installer)
 - 5 (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> account manager)
 - 6 (<PROGRAM> staff)
 - 00 (Other, specify)
 - 88 (Don't know)
 - 99 (Refused)

[SKIP N24 IF N23=88, 99]

- N24 Please describe the type of assistance that they provided.
- 00 Record VERBATIM
 - 88 Don't know
 - 99 Refused

ADDITIONAL PROJECTS

[ASK N26 IF MSAME=1]

Our records show that <COMPANY> also received an incentive from <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> for <NSAME> other <ENDUSE> project(s).

- N26 Was it a single decision to complete all of those <ENDUSE> projects for which you received an incentive from <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> or did each project go through its own decision process?
- 1 (Single Decision)
 - 2 (Each project went through its own decision process)
 - 00 (Other, specify)
 - 88 (Don't know)
 - 99 (Refused)

[ASK N27 IF FSAME=1 ELSE SKIP TO SPILLOVER MODULE]

Our records show that <COMPANY> also received an incentive from <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> for a <FDESC> project at < ADDRESS >.

- N27 Was the decision making process for the <FDESC> project the same as for the <ENDUSE> project we have been talking about?
- 1 (Same decision making process)
 - 2 (Different decision making process)
 - 00 (Other, specify)
 - 88 (Don't know)
 - 99 (Refused)

SPILOVER MODULE

Thank you for discussing the new <ENDUSE> that you installed through the <PROGRAM>. Next, I would like to discuss any energy efficient equipment you might have installed OUTSIDE of the program.

SP1 Since your participation in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program, did you implement any ADDITIONAL energy efficiency measures at this facility or at your other facilities within the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> service territory that did NOT receive incentives through any utility or government program?

- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

[ASK SP2-SP7i IF SP1=1, ELSE SKIP TO S0]

SP2 What was the first measure that you installed or implemented? (IF RESPONSE IS GENERAL, E.G., "LIGHTING EQUIPMENT", PROBE FOR SPECIFIC MEASURE. PROBE FROM LIST, IF NECESSARY. IF RESPONDENT IS UNSURE OF DETAILS ASK THEM TO MAKE THEIR BEST GUESS OR OFFER ALTERNATIVE DESCRIPTION UNDER 00 - "OTHER")

1. HVAC Steam Trap Repairs (Low Pressure <15 psi)
2. HVAC Steam Trap Repairs (High Pressure >=15 psi)
3. HVAC Steam Trap Replacement (Low Pressure <15 psi)
4. HVAC Steam Trap Replacement (High Pressure >=15 psi)
5. HVAC Steam Trap Test
6. Industrial/Process Steam Trap (Low Pressure <15 psi)
7. Industrial/Process Steam Trap (High Pressure >=15 psi)
8. Industrial/Process Steam Trap Test
9. Space Heating Hot Water Boilers (< 300 MBH and Rated AFUE of 90% or Greater)
10. Space Heating Hot Water Boilers (>= 300 MBH and Rated Thermal Energy of 85% or Greater)
11. Space Heating Hot Water Boilers (>= 300 MBH and Rated Thermal Energy of 90% or Greater)
12. Space Heating Hot Water Boiler – Condensing Unit Heater (Rated Thermal Energy of 90% or Greater)
13. Space Heating Hot Water Boiler Cutout and Reset Controls
14. Boiler Tune up (Rated at >= 110MBH Output with a post tune-up increase in efficiency)
15. Industrial Burner Tune Ups (Rated at >= 110MBH Output with a post tune-up increase in efficiency)
16. Domestic Hot water Pipe Insulation (Pipe must be part of a domestic hot water distribution system. Minimum pipe diameter of 0.5 inch Pipe insulation installed must be ≥ R-2)
17. Hot Water Boiler Pipe Insulation (Minimum pipe diameter of 1 inch)
18. Steam Boiler Pipe Insulation (Minimum pipe diameter of 1 inch)

19. Space Heating Furnaces (>92% to <95% AFUE)
20. Space Heating Furnaces (>= 95% AFUE)
21. Space Heating Furnaces (Infrared Heaters)
22. Natural Gas Water Heaters (<75 MBH Input and >= .67 Energy Factor)
23. Large Natural Gas Water Heater (>= 75 Input and >= 90% Thermal Efficiency)
24. Indirect Water Heater (Must be paired with a condensing, modulating hot water boiler rated at either ≥ 90% AFUE or ≥ 85% thermal efficiency)
25. Tankless Water Heater (Must be rated at < 200 MBH input and ≥ 0.82)
26. Programmable Thermostats
27. Indoor Pool or Spa Covers (must be rated by manufacturer as a pool or spa cover)
28. Food Service Equipment (Convection Oven – Energy Star or Fisher-Nickel)
29. Food Service Equipment (Combination Oven – Energy Star or Fisher-Nickel)
30. Food Service Equipment (Fryer – Energy Star or Fisher-Nickel)
31. Food Service Equipment (Upright Boiler with infrared burner)
32. Food Service Equipment (Large Conveyor Oven - Energy Star or Fisher-Nickel with conveyor belt => 25 inches)
33. Food Service Equipment (Pasta Cooker –infrared burner and designated as a pasta cooker by manufacturer)
34. Food Service Equipment (Rotisserie Oven)
35. Food Service Equipment (Salamander Broiler)
36. Food Service Equipment (Pre-Rinse Sprayers - Must have a flow rate of ≤ 1.6 GPM and replace a sprayer ≥ 2.2 GPM.)
37. Food Service Equipment (Steamer – Energy Star or Fisher-Nickel with minimum 5 pan capacity)
38. Food Service Equipment (Griddle – Energy Star or Fisher-Nickel)
39. Food Service Equipment (Rack Oven – Energy Star or Fisher-Nickel)
00. Other: (Specify)_____
96. None – Did not implement/install any additional measures
88. Don't know
99. Refused

[SKIP TO S0 IF SP2=96, 88, 99]

SP3 What was the second measure?

- SP5 I have a few questions about the FIRST measure that you installed. (If needed, read back measure: <SP2 RESPONSE>) [OPEN END]
- a. What were the reasons that you not receive an incentive for this measure?
 - b. What were the reasons that you did not install this measure through the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program?
 - c. Please describe the SIZE, TYPE, and OTHER ATTRIBUTES of this measure.
 - d. Please describe the EFFICIENCY of this measure.
 - e. How many of this measure did you install?

SP5f. Was this measure specifically recommended by a program related audit, report or program technical specialist?

- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

SP5g. How significant was your experience in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program in your decision to implement this Measure, using a scale of 0 to 10, where 0 is not at all significant and 10 is extremely significant? [SCALE 0-10; 88=Don't Know; 99=Refused]

[SKIP SP5h IF SP5g = 88, 99]

SP5h. What were the reasons that you gave it this rating?[OPEN END]

SP5i. If you had not participated in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program, how likely is it that your organization would still have implemented this measure, using a 0 to 10, scale where 0 means you definitely WOULD NOT have implemented this measure and 10 means you definitely WOULD have implemented this measure? [SCALE 0-10; 88=Don't Know; 99=Refused]

CONSISTENCY CHECK ON PROGRAM IMPORTANCE RATING VS. NO PROGRAM RATING

[ASK CC1a IF SP5g=0,1,2,3 AND SP5i =0,1,2,3]

CC1a When you answered ...<SP5g RESPONSE> ... for the question about the influence of the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program on your decision to install this measure, I would interpret that to mean the Program was not very important to your decision. However, when you answered the previous question, it sounds like it was not very likely that you would have installed this measure had you not participated in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program. Can you please explain the role the program made in your decision to implement this measure?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

[ASK CC1b IF SP5g=8,9,10 AND SP5i =8,9,10]

CC1b When you answered ...<SP5g RESPONSE> ... for the question about the influence of the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program on your decision to install this measure, I would interpret that to mean the Program was quite important to your decision. However, when you answered the previous question, it sounds like it was very likely that you would have installed this measure had you not participated in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program. Can you please explain the role the program made in your decision to implement this measure?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

[SKIP SP6-SP7i IF SP3=96, 88, 99]

SP6 I have a few questions about the SECOND measure that you installed. (If needed, read back measure: <SP3 RESPONSE>) [OPEN END]

- a. What were the reasons that you did you not receive an incentive for this measure?
- b. What were the reasons that you did not install this measure through the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program?
- c. Please describe the SIZE, TYPE, and OTHER ATTRIBUTES of this measure.
- d. Please describe the EFFICIENCY of this measure.
- e. How many of this measure did you install?

SP6f. Was this measure specifically recommended by a program related audit, report or program technical specialist?

- 1 (Yes)
- 2 (No)
- 88 (Don't know)
- 99 (Refused)

SP6g. How significant was your experience in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program in your decision to implement this Measure, using a scale of 0 to 10, where 0 is not at all significant and 10 is extremely significant? [SCALE 0-10; 88=Don't Know; 99=Refused]

[SKIP SP6h IF SP6g = 88, 99]

SP6h. What were the reasons that you gave it this rating?[OPEN END]

SP6i. If you had not participated in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> program, how likely is it that your organization would still have implemented this measure, using a 0 to 10, scale where 0 means you definitely WOULD NOT have implemented this measure and 10 means you definitely WOULD have implemented this measure? [SCALE 0-10; 88=Don't Know; 99=Refused]

CONSISTENCY CHECK ON PROGRAM IMPORTANCE RATING VS. NO PROGRAM RATING

[ASK CC2a IF SP6g=0,1,2,3 AND SP6i =0,1,2,3]

CC2a When you answered ...<SP6g RESPONSE> ... for the question about the influence of the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program on your decision to install this measure, I would interpret that to mean the Program was not very important to your decision. However, when you answered the previous question, it sounds like it was not very likely that you would have installed this measure had you not participated in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program. Can you please explain the role the program made in your decision to implement this measure?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

[ASK CC2b IF SP6g=8,9,10 AND SP6i =8,9,10]

CC2b When you answered ...<SP6g RESPONSE> ... for the question about the influence of the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program on your decision to install this measure, I would interpret that to mean the Program was quite important to your decision. However, when you answered the previous question, it sounds like it was very likely that you would have installed this measure had you not participated in the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Program. Can you please explain the role the program made in your decision to implement this measure?

- 00 [Record VERBATIM]
- 88 (Don't know)
- 99 (Refused)

PROCESS MODULE

I'd now like to ask you a few general questions about your participation in the C&I Prescriptive Rebate Program .

Program Processes and Satisfaction

[IF S1<>1 SKIP TO S1A]

- S0 How did you first hear about the C&I Prescriptive Rebate Program?
- 1. (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Account Manager)
 - 2. (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Website)
 - 4. (Contractor/Trade Ally)
 - 5. (Email)
 - 6. (Friend/colleague/word of mouth)
 - 00. (Other, specify)
 - 88. (Don't know)
 - 99. (Refused)

- S1a Did YOU fill out the application forms for the project? (Either the initial or the final program application)
- 1. (Yes)
 - 2. (No)
 - 88. (Don't know)
 - 99. (Refused)

[ASK S1b IF S1a=1 ELSE SKIP TO S1e]

- S1b Did the application forms clearly explain the program requirements and how to participate?
- 1. (Yes)
 - 2. (No)
 - 3. (Somewhat)
 - 88. (Don't know)
 - 88. (Refused)

S1c How would you rate the application process? Please use a scale of 0 to 10 where 0 is “very difficult” and 10 is “very easy”. [SCALE 0-10; 88=Don’t know, 99=Refused]

[ASK S1d IF S1c<4]

S1d What were the reasons that you gave that rating?

1. (Difficult to understand)
2. (Long process)
00. (Other, specify)
88. (Don’t know)
99. (Refused)

[ASK S1e IF S1a=2]

S1e Who filled out the application forms for the project?

1. (Someone else at the facility)
2. (Someone else at the company)
3. (Trade Ally)
4. (Contractor)
5. (Supplier/Distributor/Vendor)
6. (Engineer)
7. (Consultant)
00. (Other, specify)
88. (Don’t know)
99. (Refused)

[IF S1=3, SKIP TO S8]

S4a Did you use a contractor for your <ENDUSE> project?

1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK S4b IF S4a=1]

S4b Was the contractor you used a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Trade Ally? (IF NEEDED: Was the contractor REGISTERED with the C&I Prescriptive Rebate Program?)

1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK S5 IF S4a=1 ELSE SKIP TO S7]

S5 How would you rate the contractor’s ability to meet your needs in terms of implementing your project? Please use a scale from 0 to 10, where 0 is “not at all able to meet needs” and 10 is “completely able to meet needs”? [SCALE 0-10; 88=Don’t know, 99=Refused]

- S6a Would you recommend the contractor you worked with to other people or companies?
1. Yes
 2. No
 8. (Don't know)
 9. (Refused)
- S6b What are the reasons that you would not recommend the contractor with whom you worked?
1. (Too small)
 00. (Other, specify)
 88. (Don't know)
 99. (Refused)
- S7 When implementing an energy efficiency project, how important is it to you that the contractor is a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Trade Ally? Please use a scale from 0 to 10, where 0 is "not at all important" and 10 is "very important"? [SCALE 0-10; 88=Don't know, 99=Refused]
- S8 During the course of your participation in the program, did you place any calls to the C&I Prescriptive Rebate Program Call Center?
1. Yes
 2. No
 8. (Don't know)
 9. (Refused)

[ASK S9 IF S8=1]

- S9 On a scale of 0 to 10, where 0 is "very dissatisfied" and 10 is "very satisfied;" how would you rate your satisfaction with the Call Center's ability to answer your questions? [SCALE 0-10; 88=Don't know, 99=Refused]

[ASK S10 IF S9<4]

- S10 What were the reasons that you gave it that rating?
1. (Provided inconsistent information)
 2. (Didn't understand the question)
 3. (Hard to reach the right person/person with the answer)
 00. (Other, specify)
 88. (Don't know)
 99. (Refused)

- S11 On a scale of 0 to 10, where 0 is very dissatisfied and 10 is very satisfied, how would you rate your satisfaction with... [SCALE 0-10; 96=not applicable, 88=Don't know, 99=Refused]
- the incentive amount
 - the communication you had with the C&I Prescriptive Rebate Program staff
 - the measures offered by the program (If needed: this is the equipment that is eligible for an incentive under the program)
 - the C&I Prescriptive Rebate Program overall
 - <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> overall

[ASK S12a IF S11a<4]

- S12a You indicated some dissatisfaction with the incentive amount, what are the reasons that you gave this rating? [MULTIPLE RESPONSE; UP TO 3]
- (Better rebates in other states)
 - (Too small)
 - (Equipment didn't qualify)
 00. (Other, specify)
 88. (Don't know)
 99. (Refused)

[ASK S12b IF S11b<4]

- S12b You indicated some dissatisfaction with the communication you had with the C&I Prescriptive Rebate Program staff, what are the reasons that you gave this rating?
- (Provided inconsistent information)
 - (Didn't understand the question)
 - (Hard to reach the right person/person with the answer)
 00. (Other, specify)
 88. (Don't know)
 99. (Refused)

[ASK S12b IF S11c<4]

- S12c You indicated some dissatisfaction with the measures offered by the C&I Prescriptive Rebate Program, what are the reasons that you gave this rating? [OPEN END; 88=Don't know, 99=Refused]

[ASK S12d IF S11d<4]

- S12d You indicated some dissatisfaction with the C&I Prescriptive Rebate Program overall, what are the reasons that you gave this rating?
- (Not as easy as other states)
 - (No clear guidance)
 00. (Other, specify)
 88. (Don't know)
 99. (Refused)

[ASK S12e IF S11e<4]

S12e You indicated some dissatisfaction with <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> overall, what are the reasons that you gave this rating?

1. (Rates are too high)
2. (Took too long to get rebate)
3. (Poor customer service)
4. (Poor power supply/service)
00. (Other, specify)
88. (Don't know)
99. (Refused)

Marketing and Outreach

[IF S1<>1, SKIP TO B1A]

MK0 I'm now going to ask you about several specific ways in which you might have seen or heard information about the C&I Prescriptive Rebate Program. Have you ever... [1=Yes, 2=No, 8=(Don't know), 9=(Refused)]

- a. Received information about the program in your monthly utility bill?
- b. Attended a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> customer event where the program was discussed?
- c. Discussed the program with a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Account Manager?
- d. Discussed the program with a Contactor or Trade Ally?
- e. Seen information about the program on the <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Website?
- f. Received information about the program in an Email?
- g. Heard about the program from a colleague, friend or family member?
- h. Attended a meeting, seminar or workshop where the program was presented?
- i. Attended a webinar where the program was discussed?
- j. Read about the program in a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Newsletter?
- k. Been directly contacted by a <UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> or Franklin Energy outreach staff?

How much did the information you received peak your interest and motivate you to find out more about the program?

MK1b How useful were the program's marketing materials in providing information about the program? Would you say they were...

1. Very useful
2. Somewhat useful
3. Not very useful
4. Not at all useful
8. (Don't know)
9. (Refused)

[ASK MK1c IF MK1b=3,4]

MK1c What would have made the materials more useful to you? [MULTIPLE RESPONSE, UP TO 3]

1. (More detailed information)
2. (Where to get additional information)
00. (Other, specify)
88. (Don't know)
99. (Refused)

MK2 In general, what is the best way of reaching companies like yours to provide information about energy efficiency opportunities like the C&I Prescriptive Rebate Program? [MULTIPLE RESPONSE, UP TO 3]

1. (Bill inserts)
2. (Flyers/ads/mailings)
3. (e-mail)
4. (Telephone)
5. (<UTILITY (PEOPLES GAS OR NORTH SHORE GAS)> Account Manager)
8. (Trade allies/contractors)
00. (Other, specify)
88. (Don't know)
99. (Refused)

Benefits and Barriers

B1a What do you see as the main benefits to participating in the C&I Prescriptive Rebate Program? [MULTIPLE RESPONSE, UP TO 3]

1. (Energy Savings/Saving money)
2. (Good for the Environment)
3. (Lower Maintenance Costs)
4. (Better Quality/New Equipment)
5. (Rebate/Incentive)
9. (Able to make improvements sooner)
00. (Other, Specify)
88. (Don't know)
99. (Refused)

B1b What do you see as the drawbacks to participating in the program? [MULTIPLE RESPONSE, UP TO 3]

1. (Paperwork too burdensome)
2. (Incentives not high enough/not worth the effort)
3. (Program is too complicated)
4. (Cost of equipment)
5. (No drawbacks)
00. (Other, specify)
88. (Don't know)
99. (Refused)

B2 BLANK

B3 Was the scope of your project limited by the program's incentive cap?

1. Yes
2. No
00. (Other, specify)
88. (Don't know)
99. (Refused)

Feedback and Recommendations

R1 Do you plan to participate in the program again in the future?

1. Yes
2. No
3. Maybe
8. (Don't know)
9. (Refused)

R2 How could the C&I Prescriptive Rebate Program be improved? [MULTIPLE RESPONSE, UP TO 4]

1. (Higher incentives)
2. (More measures)
3. (Greater publicity)
4. (Better Communication/Improve Program Information)
8. (Simplify application process)
11. (Quicker processing times)
00. (Other, specify)
96. (No recommendations)
88. (Don't know)
99. (Refused)

Firmographics

I only have a few general questions left.

F1 BLANK

F2 Which of the following best describes the ownership of this facility?

1. <COMPANY> owns and occupies this facility
2. <COMPANY> owns this facility but it is rented to someone else
3. <COMPANY> rents this facility
8. (Don't know)
9. (Refused)

F6 And which of the following best describes the facility? This facility is...

1. <COMPANY>'s only location
2. one of several locations owned by <COMPANY>
3. the headquarters location of <COMPANY> with several locations

F4a How old is this facility? [NUMERIC OPEN END, 0 TO 150; 8888=Don't know, 9999=Refused]

F5a How many employees, full plus part-time, are employed at this facility? [NUMERIC OPEN END, 0 TO 2000; 88888=Don't know, 999999=Refused]

[SKIP F7 IF F2=2]

F7 In comparison to other companies in your industry, would you describe <COMPANY> as...

1. A small company
2. A medium-sized company
3. A large company
4. (Not applicable)
8. (Don't know)
9. (Refused)

5.7.2 Trade Ally Survey

C&I Prescriptive Program Trade Ally Contractor In-Depth Interview Guide

Respondent name:	
Respondent phone number:	
Respondent title:	
Email Address:	
Respondent Company	
Date:	
Status:	

Section	Topics	Questions
Background	What type of business does the trade ally conduct and what types of experience does this trade representative have?	Q1-Q3
Marketing and Participation	How did trade ally become aware of this program and other utility programs? Do you refer customers to other utility programs? Is the level of utility marketing sufficient? Has word of mouth marketing had an impact?	Q4-Q8
Program Barriers	How could the program be changed to overcome the barriers encountered by customers and trade allies?	Q9-Q10
Administration and Delivery	How do you market the program? How do you provide customers with service for both electric and gas energy efficient equipment? Does program delivery occur in a timely manner? Do you need more training?	Q11-Q17
Program Satisfaction	How satisfied are trade allies with the program? How satisfied are customers with the program? Do the inspections increase or decrease customer satisfaction?	Q18-Q21

Section	Topics	Questions
Economic Indicators	How do the current economic conditions impact the program? Have your business revenues grown? Have you hired more employees? Do you plan on continuing your participation?	Q22-Q26
Free-ridership and Spillover	Would customers have installed the equipment without the program (free-ridership)? About what percentage of customers have installed additional energy efficient equipment without an incentive (spillover)?	Q27-Q37

[Note to Reviewer] The Interview Guide is a tool to guide process evaluation interviews with utility staff and implementation contractors. The guide helps to ensure the interviews include questions concerning the most important issues being investigated in this study. Follow-up questions are a normal part of these types of interviews. Therefore, there will be sets of questions that will be more fully explored with some individuals than with others. The depth of the exploration with any particular respondent will be guided by the role that individual played in the program's design and operation, i.e., where they have significant experiences for meaningful responses. The interviews will be audio taped and transcribed.

Introduction

(Note: the interviewer should change the introduction to match his/her own interviewing style)

Hi, may I please speak with [NAME]?

My name is ___ and I'm calling from Navigant Consulting, we are part of the team hired to conduct an evaluation of the [Peoples Gas and North Shore Gas] Business Prescriptive Program. At this time we are interested in asking you some questions about your experiences with the Business Prescriptive Program. The questions will only take about a half hour. Is this a good time to talk? [IF NOT, SCHEDULE A CALL BACK.]

Background

1. Can you briefly describe the company you work for and the type of business it conducts?
How many are employed at your company? Who are your primary business customers?
2. Can you briefly summarize your roles and responsibilities at your company? For how long have you carried these out?
3. How would you describe your familiarity with your company's relationship with the Peoples Gas and North Shore Gas' Business Prescriptive Program?

Marketing and Participation

4. How and when did you (the contractor) become aware of the program? What other ways can the utilities and program implementers use to boost program awareness with contractors?
5. Are you aware of other Peoples Gas and North Shore Gas Programs? Have you referred any customers to other Peoples Gas and North Shore Gas business programs? Do you have any materials that you can leave with customers describing the full range of [Peoples Gas and North Shore Gas] Programs? (ASK SEPARATELY ABOUT EACH)
6. What kind of support, if any, does [Peoples Gas and North Shore Gas] provide to you for marketing the Business Prescriptive Program to your customers? Do you use utility-produced marketing materials?
7. Do you think the level of marketing and promotion of the Business Prescriptive Program has been appropriate so far? Do you think promotional efforts are successful? Do you think they reach the right audience? If the utilities or implementers are missing areas of opportunity, what are those areas?
8. Have you noticed any spontaneous word- of- mouth marketing among Peoples Gas and North Shore Gas' customers? For example, do customers know of other participating businesses before you contact them?

Program Characteristics and Barriers

9. What areas could be improved to create a more effective program for customers and program partners? What could be modified to make the program work better (e.g., incentive levels, eligible equipment, etc.)? What would you recommend? Why do you think this change is needed?
10. Have you looked at the website to find program information? Did you find the information that you needed?

Administration and Delivery

11. Do you actively market the program to your customers? How do you decide which Peoples Gas and North Shore Gas customers to contact about the program? Are these customers current customers of yours? Do you market to targeted geographic areas? What prevented you from more active participation in the program?
12. This program provides rebates for electric and gas measures. How do you provide customers with the full program? Do you currently partner with another company? As an electrical contractor/ an HVAC contractor, do you plan to partner with an HVAC contractor/electrical to be able to install the complete list of measures offered in the next program year? If no, why not?

13. After the customer agrees to install the recommended low-cost equipment, how long does it usually take to schedule the installation?
14. How long does it take to process your payment after installation? Is this an acceptable amount of time?
15. Are you able to provide qualified customers with a loan arrangement? Who financed these loans? About what percent of your PRESCRIPTIVE program sales are financed?
16. Do you know whom to contact for help with this program? Who would you call?
17. What training did you receive in how to deliver this equipment to customers? Would more training be useful? What types of training would be helpful?

Satisfaction with the PRESCRIPTIVE Program

18. Are you satisfied with the program? Why or why not?
19. Has the program provided your organization with an opportunity to provide an increased level of customer service to your new and current customers?
20. Are customers satisfied with the program? Why or why not? Have you had any call backs and if so, on what measures?
21. Are the incentives levels effective at encouraging customers to install equipment they would not have considered without the program? The implementers (Franklin Energy) conduct pre and post inspections of the installations. Are these inspections conducted quickly? Do they present a barrier to participation or are they a burden on customers? Do the pre-inspections unnecessarily delay installations? Do the post-inspections unnecessarily delay incentive payments?

Economic Indicators

22. Do you think the current economic conditions are affecting the program? If so, how?
23. Do you find the PRESCRIPTIVE Program is a competitive advantage for your firm?
24. Has your business revenues grown in the past year (Y/N)? If yes would you attribute any of that growth to the Business Prescriptive Program? About what % (+/- 10%)
25. Have you hired more employees because of work generated by the Business Prescriptive Program? How many? In the next year will you hire more employees to handle increased work generated by the program? About how many?
26. Do you plan to continue participating in the program through 2013?

Free-ridership and Spillover

27. Were you installing this type of equipment that would have qualified for the program prior to participating in this program? [IF YES] What kind? About what percent of your sales do you think were of this type of energy efficient equipment in 2010 – before the program? Was it more than 50% or less than 50%? More or less than 75% or 25%? Etc.
28. About what percent of your total sales do you think qualified for the program in 2011 – after you became a Business Prescriptive Program Trade Ally? Was it more than 50% or less than 50%? More or less than 75% or 25%? Etc. Did all of these installations receive a rebate?
29. About what percent of your total sales do you think would have been for the same type of qualifying equipment in 2011 if the Prescriptive program was not offered?
30. Of the [number of projects in program] in 2011, how many of these businesses were your customers before they participated in the program?
31. Of the businesses who were your customers before the Prescriptive program, how many of them had EVER installed energy efficient equipment that you are aware of? What type of equipment was it? When was that project installed?
32. Did the customer receive a rebate from a utility program for installing that qualifying equipment? (Electric only, no gas rebates existed in Illinois before GPY1)
33. Why do you think the customer did not receive a rebate for this equipment?
34. Have any of the PRESCRIPTIVE Program participants asked your organization to install additional energy efficient equipment after their program participation? What did you install? Why did they want more equipment? Did the equipment qualify for a utility incentive?
35. If the Prescriptive program had not been available in 2011, how would your sale of program-qualifying equipment be different?

Spillover

36. How many of your customers purchase program equipment and do not apply for the incentive offered by the utility? [Which measure types and rough scope.]
 - What do you think is the reason for this ? (e.g., too time-consuming, too much paperwork, incentive too small to bother)
37. How many of your customers choose to implement other energy efficiency measures (actions like pipe wrap or other energy efficiency equipment not incented by the program)

as a result of awareness of or participating in the program? What types of things do they usually do? (Try to develop a number for each type.)

38. Thank you and closing.